Roadstar®

CTV-1010XK-XKT

Service Manual - CTV-1010XK-XKT

CONTENTS

PG.

3. 1. PRECAUTIONS
3-5. 1-1. SAFETY PRECAUTIONS
5,6. 1-2. SERVICING PRECAUTIONS
6. 1-3. PRECAUTION FOR ELECTROSTATICALLY SENSITIVE DEVICES (ESDs)
7. 2. SPECIFICATIONS
8. 3. DESCRIPTIONS OF CONTROLS
9. 4. ALIGNMENT AND ADJUSTMENTS
9. 4-1. PREADJUSTMENT
9-13. 4-2. FACTORY/SERVICE MODE
13-17. 4-3. OTHER ADJUSTMENTS
17. 5. USING DEVICES AND DESCRIPTION
17-20. 5-1. MAIN SIGNAL PROCESSOR (TDA8842)
21. 5-2. VERTICAL OUTPUT (TDA8356)
22. 5-3. TRIPLE VIDEO OUTPUT AMPLIFER (TDA6107Q)
23,24. 5-4. L4964
25,26. 5-5. TDA2007A
27. 5-6. VIDEO SELECT SWITCH (NJM2235L)
28,29. 5-7. TELETEX (SAA5281P)
30,31. 5-8. POWER CIRCUIT (TEA2262)
32. 6. TECHNICAL STUDY (SMPS OPERATION)
32. 6-1. STARTING MODE-STAND BY MODE
32,33. 6-2. NORMAL MODE
33. 6-3. SECURITY FUNCTIONS
34. 6-4. OVERVOLTAGE DETECTION
34. 6-5. CURRENT LIMITATION OF THE POWER TRANSISTORS
34. 6-6. RESTART OF THE POWER SUPPLY
34. 7. TROUBLE SHOOTING
35. 7-1. NO POWER
35. 7-2. NO RASTER
36. 7-3. NO SOUND
37. 8. BLOCK DIAGRAM
38. 9. DIFFERENT PARTS LIST
39,40. 10. PCB LAYOUT
41-46. 11. PARTS LIST
CIRCUIT DIAGRAM

1. PRECAUTIONS

Follow these safety, servicing and ESD precautions to prevent damage and protect against potential hazards, such as electrical shock and X-rays.

1-1 Safety Precautions

1. Be sure that all of the built-in protective devices are replaced.
   Restore any missing protective shields.
2. When reinstalling the chassis and its assemblies, be sure to restore all protective devices, including：nonmetallic control knobs and compartment covers.
3. Make sure that there no cabinet openings through which people-particularly children-might insert fingers and contact dangerous voltages. Such opening include the spacing between the picture tube and the cabinet mask, excessively wide cabinet ventilation slots, and improperly fitted back covers.
   If the measured resistance is less than 1.0 megohm or greater than 5.2 megohms, an abnormality exists that must be corrected before the unit is returned to the customer.
4. Leakage Current Hot Check (Figure 1-1)：
   Warning：Do not use an isolation transformer during this test. Use a leakage current tester or a metering system that complies with International Electrotechnical Commission 65.(IEC 65)

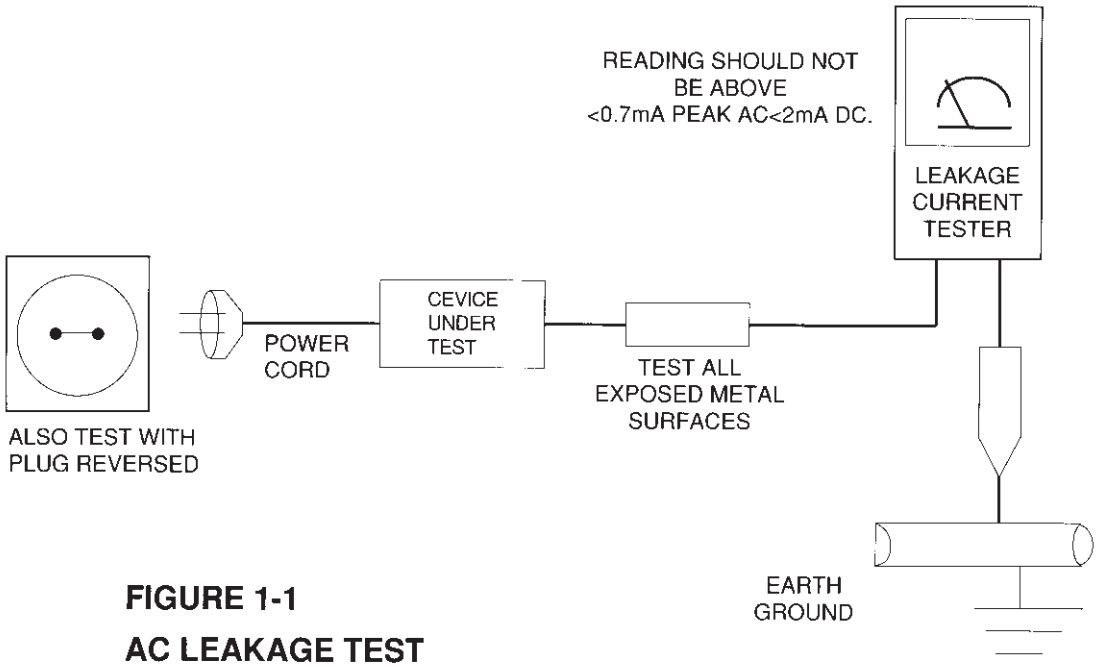


FIGURE 1-1
AC LEAKAGE TEST

5. With the unit completely reassembled, plug the AC line cord directly the power outlet. With the unit' s AC switch first in the ON position and then OFF, measure the current between a known earth ground (metal water pipe, conduit, etc) and all exposed metal parts, including：antennas, handle brackets, metal cabinets, screwheads and control shafts. The current measured should not exceed 0.5 milliamp. Reverse the power-plug prongs in the AC outlet and repeat the test.
6. Antenna Cold Check：
   With the unit' s AC plug disconnected from the AC source, connect an electrical jumper across the two AC prongs. Connect one lead of the ohmmeter to an AC prong. Connect the other lead to the coaxial connector.
7. X-ray Limits：
   The picture tube is especially designed to prohibit X-ray emissions.
   To ensure continued X-ray protection, replace the picture tube only with one that is the same type as the original. Carefully reinstall the picture tube shields and mounting hardware：these also provide X-ray protection.
8. High Voltage Limits：
   High voltage must be measured each time servicing is done on the +B, horizontal deflection or high voltage circuits.
9. High voltage is maintained within specified limits by close-tolerance, safety-related components and adjustments. If the high voltage exceeds the specified limits, check each of the special components.
10. Design Alteration Warning：
    Never alter or add to the mechanical or electrical design of this unit.
    Example：Do not add auxiliary audio or video connectors. Such alterations might create a safety hazard. Also, any design changes or additions will void the manufacturer' s warranty.
11. Components, parts and wiring that appear to have overheated or that are otherwise damaged should be replaced with parts that meet the original specifications. Always determine the cause of damage or overheating, and correct any potential hazards.
12. Observe the original lead dress, especially near the following areas：
    Antenna wiring, sharp edges, and especially the AC and high voltage power supplies. Always inspect for pinched, out-of place, or frayed wiring.
    Do not change the spacing between components and the printed circuit board. Check the AC power cord for damage. Make sure that leads and components do not touch thermally hot parts.
13. Picture Tube Implosion Warning：
    The picture tube in this receiver employs "integral implosion" protection.
    To ensure continued implosion protection, make sure that the replacement picture tube is the same as the original.

14. Do not remove, install or handle the picture tube without first putting on shatterproof goggles equipped with side shields.
    Never handle the picture tube by its neck. Some "in-line" picture tubes are equipped with i permanently attached deflection yoke ; do not try to remove such "permanently attached" yokes from the picture tube.
15. Product Safety Notice :
    Some electrical and mechanical parts have special safety-related characteristics which might not be obvious from visual inspection.
    These safety features and the protection they give might be lost if the replacement component differs from the original--even if the replacement is rated for higher voltage, wattage, etc.
    Components that are critical for safety are indicated in the circuit diagram by shading(⚠)
    Use replacement components that have the same ratings, especially for flame resistance and dielectric strength specifications. A replacement part that does not have the same safety characteristics as the original might create shock, fire or other hazards.

1-2 Servicing Precautions

Waning 1 : First read the "Safety Precaution" section of the manual.
If some unforeseen circumstance creates a conflict between the servicing and safety precautions, always follow the safety precaution.
Warning 2 : An electrolytic capacitor installed with the wrong polarity might explode.

1. Servicing Precautions are printed on the cabinet. Follow them.
2. Always unplug the unit' s AC power cord from the AC power source before attempting to : (a) Remove or reinstall any component or assembly, (b) Disconnect an electrical plug or connector, (c) Connect a test component in parallel with an electrolytic capacitor.
3. Some components are raised above the printed circuit board for safety.
   An insulation tube or tape is sometimes used. The internal wiring is sometimes clamped to prevent contact with thermally hot components.
   Reinstall all such elements to their original position.
4. After servicing, always check that the screws, components and wiring have been correctly reinstalled. Make sure that the portion around the serviced part has not been damaged.
5. Check the insulation between the blades of the AC plug and accessible conductive parts (examples : metal panels, input terminals).
6. Insulation Checking Procedure : Discontent the power cord from the AC source and turn the power switch ON. Connect an insulation resistance meter (500V) to the blades of the

AC plug.

The insulation resistance between each blade of the AC plug and accessible conductive parts (see above) should be greater than 1 megohm.

7. Never defeat any of the B+ voltage interlocks. Do not apply AC power to the unit (or any of its assemblies) unless all solid-state heat sinks are correctly installed.
8. Always connect a test instrument' s ground lead to the instrument chassis ground before connecting the positive lead ; always remove the instrument' s ground lead list.

1-3 Precautions for Electrostatically Sensitive Devices (ESDs)

1. Some semiconductor ("solid state") devices are easily damaged by static electricity. Such some components are called Electrostatically Sensitive devices (ESDs) ; examples include integrated circuits and some field-effect transistors. The following techniques will reduce the occurrence of component damage caused by static electricity.
2. Immediately before handling any semiconductor components or assemblies, drain the electrostatic charge from your body by, touching a known earth ground. Alternatively, wear the discharging wrist-strap device. (Be sure to remove it prior to applying power- this is an electric shock precaution.
3. After removing an ESD-equipped assembly, place it on a conductive surface such as aluminum foil to prevent accumulation of electrostatic charge.
4. Do not use freon-propelled chemicals. These can generate electrical charges that damage ESDS.
5. Use only a grounded-tip soldering iron when soldering or unsoldering ESDS.
6. Use only an anti-static solder removal device. Many solder removal devices are not rated as "anti-static" ; these can accumulate sufficient electrical charge to damage ESDS.
7. Do not remove a replacement ESD front its protective package until you are ready to install it. Most replacement ESDs are packaged with leads that are electrically shorted together by conductive foam, aluminum foil or other conductive materials.
8. Immediately before removing the protective material from the leads of a replacement ESD, touch the protective material to the chassis or circuit assembly into which the device will be installed.
9. Minimize body motions when unpackaged replacement ESDS. Motion, such as brushing clothes together, or lifting a foot from a carpeted floor can generate, enough static electricity to damage an ESD.

2. SPECIFICATIONS

1. Television system

CHASSIS	SYSTEM
"J"	PAL-I
"J"	PAL-B/G, SECAM-B/G
"J"	PAL-B/G, D/K, SECAM-B/G, D/K
"J"	PAL-B/G, D/K, SECAM-B/G, D/K, PAL-I
"J"	PAL-B/G, D/K, SECAM-B/G, D/K, PAL-I, NT3.58/4.43

2. Channels

SYSTEM / BAND	PAL/SECAM-B/G, I	PAL/SECAM-D/K	SECAM-K1 PAL-D	PAL/SECAM-B/G, I
VHF	2 - 12	1 - 12	2 - 9	2 - 13
UHF	21 - 69	21 - 69	13 - 57	14 - 69
CATV	X, Y, Z, S1-S41			

3. Intermediate frequencies (MHz)

SYSTEM / IF Carrier	PAL/SECAM-B/G, I	PAL/SECAM-D/K	SECAM-K1 PAL-D	PAL/SECAM-B/G, I
Picture IF	38.9	38.9	38.9	38.9
Sound IF	33.4	32.4	32.9	32.9
Color Sub Carrier	34.47	34.47	34.47	34.47

4. Picture Tube

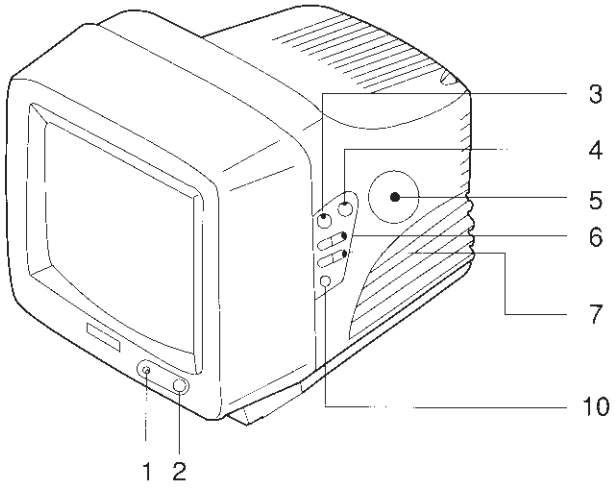
10 Inch	A23KQT22X12	Quick start, In line gun Black stripe, 90° degree deflection

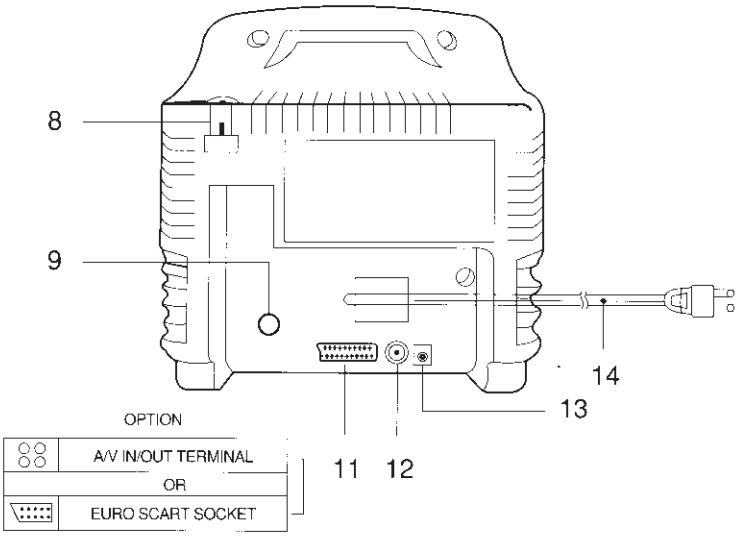
5. Power Requirements : AC 100 ~ 260V, 50/60 Hz, (DC 12 ~ 24V)

6. Antenna Input Impedance : 75 Unbalanced coaxal

7. Speaker Impedance : 8 ohm, 1.3W(1 SPK)

3. DESCRIPTION OF CONTROLS





1. Stand-By Lamp
2. Remote Control Sensor
3. Power Switch
4. TV/VIDEO Key
5. Speaker
6. Program Down(▼)/ Up (▲)Key
7. Volume Down (▼)/ Up (▲)Key
8. Antenna Holder
9. Antenna Jack(75 ohm)
10. Earphone Jack
11. Euro Scart Jack
12. Main Power Switch
13. DC Power Jack(12V ~ 24V)
14. AC Power Cord

♣ **WARNING : TO PREVENT FIRE OR SHOCK HAZARD, DO NOT EXPOSE THIS TELEVISION TO RAIN OR MOISTURE**

4. ALIGNMENT AND ADJUSTMENTS

4-1 Preadjustment

4-1-1 Factory Mode

1. Do not attempt these adjustments in the VIDEO mode.
2. The Factory Mode adjustments are necessary when either the EEPROM(Q002) or the CPT is replaced.
3. Do not tamper with the "Adjustment" screen of the Factory Mode menu. The screen is intended only for factory use.

4-1-2 When EEPROM (Q002) is replaced

1. When Q002 is replaced all adjustment data revert to their initial values. It is necessary to re-program this data.
2. After Q002 is replaced, warm up the TV for 10 seconds.

4-1-3 When CPT is replaced

1. Make the following the adjustments after setting up purity and convergence:
   White Balance
   Vertical center
   Vertical size
   Horizontal size

4-2 Factory / Service Mode

4-2-1 Procedure for the "Adjustment" Mode

1. This mode uses the standard remote control. The Factory (Service) Mode is activated by pressing the "Factory" key on the remote control.
2. The Factory Mode will be displayed. The Factory Mode has six components: Screen adjustment, Position adjustment, White balance, AGC adjustment, Heat Run and Test pattern.
3. Access the Adjustment Mode by pressing the VOLUME keys (Up or Down). The adjustment Parameters adjusted are listed in the accompanying table, and they are selected by pressing the PROGRAM keys (Up or Down).
4. The VOLUME keys increase or decrease the adjustment values, which are stored in the non-volatile memory as soon as the adjustment is cancelled.
5. Cancel the Adjustment Mode by pressing the OUTCONDITION key.

4-2-2 Service Adjustment Parameter

Main Adjustment Parameter			
FUNCTION	OSD ABBREVIATION	RANGE	INITIAL DATA
SCREEN VOLTAGE	Screen ADJ	---	---
INCH OPTION	Inch	(06,10),14, 20, 21	(06,10) Inch
HORIZONTAL SHIFT	Hrs	0 ~ 63 Step	38
VERTICAL AMPLITUDE	Height	0 ~ 63 Step	30
VERTICAL SHIFT	VRS	0 ~ 63 Step	32
VERTICAL SLOPE	VS	0 ~ 63 Step	38
RED CUTOFF	R	0 ~ 63 Step	32
GREEN CUTOFF	G	0 ~ 63 Step	32
BLUE CUTOFF	B	0 ~ 63 Step	32
AUTO GAIN CONTROL	AGC AUTO	0 ~ 63 Step	15
AUTO GAIN CONTROL	AGC MANUAL	0 ~ 63 Step	15

4-2-3 Factory Adjustment Parameter

FUNCTION	OSD	DESCRIPTION	INITIAL DATA
IF Sensitivity	IFS	Off : Normal sensitivity On : Maximum gain reduced by 20dB	Off
Modulation standard	MOD	Off : Negative modulation On : Positive modulation	Off
Video mute switch	VSW	Off : Normal operation On : IF Video signal switched off	Off
Search tuning mode	STM	Off : Normal operation On : Reduced dynamic sensitivity of coincidence detector	Off
Video ident mode	VIM	Off : Ident coupled to CVBS$_{INT}$ On : Ident coupled to selected CVBS or Y/C	Off
AFC Window	AFW	Off : Nominal window On : Enlarged window	Off
PLL demodulator frequency adjust	LFA	Off : Normal IF frequency On : Frequency shift for L standard	Off
X-tal definition	XA XB	0,0 : 3.6MHz, 3,6MHz, 0,1 : 3.6MHz, Open 1,0 : Open, 3,6MHz, 1,1 : 3.6MHz, 4.4MHz	1,1
Synchronisation	POC	Off : Active On : Not active	Off
Phase 1 time constant	FOA FOB	0,0 : Normal, 0,1 : Slow 1,0 : Slow/Fast, 1,1 : Fast	Normal
Video ident mode	VID	Off : Phase 1 loop switched on and off On : Not active	Off
Long blanking mode	LBM	Off : Adapted to standard (50 or 60Hz) On : Fixed in accordance with 50Hz standard	Off
Interlace	DL	Off : Interlace On : De-interlace	Off

Forced field frequency	FORF FORS	0,0 : Auto 60Hz, 0,1 : 60Hz forced 1,0 : Keep last detected freq., 1,1 : Auto 50Hz	1,1
Vertical divider mode	NCIN	Off : Normal On : Switched to large search window	Off
Vertical overscan	OSO	Off : Switch-off undefined On : Switch-off in vertical overscan	On
Vertical scan disable	VSD	Off : Vertical scan active On : Vertical scan disabled	Off
Helper output blanking	HOB	Off : Not active On : Active	Off
Enable vertical guard	EVG	Off : Not active On : Active	Off
Service blanking	SBL	Off : Not active On : Active	Off
Cathode drive level	CL 0 1 2	0 0 0 : 57V, 0 0 1 : 63V, 0 1 0 : 70V, 0 1 1 : 77V 1 0 0 : 84V, 1 0 1 : 91V, 1 1 0 : 99V, 1 1 1 : 107V	0 1 1
Auto kine biasing	AKB	Off : Active On : Not active	Off
Automatic start up	AST	Off : Automatic mode On : Switch on under control of u-processor	Off
RGB Blanking	RBL	Off : Not active On : Active	Off
Blue stretch	BLS	Off : Not active On : Active	Off
Black stretch	BKS	Off : Not active On : Active	On
Enable fast blanking	IE1	Off : Not active On : Active	Off
Gain of luminance channel	GAI	Off : Normal gain On : High gain	Off
Y-delay adjustment	YD 0123	0 0 0 0 : 0ns, 0 0 1 0 : 40ns, 0 1 0 0 : 80ns 0 1 1 1 : 12ns, 1 0 0 0 : 160ns, 1 0 1 1 : 200ns 1 1 0 0 : 240ns, 1 1 1 0 : 280ns, 1 1 1 1 : 320ns	0 1 1 0
Input source select	IN ABC	0 0 0 : Int CVBS + audio 0 0 1 : Ext CVBS + audio 0 1 0 : Y/C + Ext audio 0 1 1 : CVBS3 + Ext audio 1 0 0 : Y/C + Int audio 1 1 0 : Y/C + Ext audio	0 0 0
Fixed audio volume	FAV	Off : Normal Volume control On : Audio level output fixed	Off
Sound mute	SM	Off : Not active On : Active	Off
Auto. volume leveling	AVL	Off : Not active On : Active	Off
Auto. Color limiting	ACL	Off : Not active On : Active	On
Chroma bandpass centre frequency	CB	Off : Fsc On : On : 1.1 × Fsc	Off

Enable ext. comb filter	CMB	Off : Disabled On : Enabled	Off
Bypass chroma delay line	BPS	Off : Active On : Bypassed	Off
Matrix selection	MAT	Off : Adapted to standard On : Forced to PAL matrix	Off
Color decoder mode	CM 012	0 0 0 : Automatic 0 0 1 : Forced X-tal pin 34 PAL/NTSC 0 1 0 : Forced X-tal pin 34 PAL 0 1 1 : Forced X-tal pin 34 NTSC 1 0 0 : Forced X-tal pin 35 PAL/NTSC 1 0 1 : Forced X-tal pin 35 PAL 1 1 0 : Forced X-tal pin 35 NTSC 1 1 1 : Forced SECAM	0 0 0
Vertical S correction	SC	63 Steps	10
	IFPL		14
Stand by	STB	Off : Stand by On : Normal	On
Overvoltage protection detection	PRD	Off : Overvoltage detection On : Overvoltage detection and stop horizontal drive(protection)	On

Input function (Write)		Sub addr. (hex)	Data bits							
			D7	D6	D5	D4	D3	D2	D1	D0
Control 0		00	INA	INB	INC	BCO	FOA	FOB	XA	XB
Control 1		01	FORF	FORS	DL	STB	POC	CM2	CM1	CM0
Hue	HUE	02	AVL/HBL	AKB	A5	A4	A3	A2	A1	A0
Horizontal shift	HSH	03	VIM	GAI	A5	A4	A3	A2	A1	A0
E-W amplitude	EW	04	0	0	A5	A4	A3	A2	A1	A0
E-W parabola/width	PW	05	0	0	A5	A4	A3	A2	A1	A0
E-W corner parabola	CP	06	0	0	A5	A4	A3	A2	A1	A0
E-W trapezium	TC	07	0	0	A5	A4	A3	A2	A1	A0
Vertical slope	VS	08	NCIN	STM	A5	A4	A3	A2	A1	A0
Vertical amplitude	VA	09	VID	LBM	A5	A4	A3	A2	A1	A0
S-Correction	SC	0A	HCO	EVG	A5	A4	A3	A2	A1	A0
Vertical shift	VSH	0B	SBL	PRD	A5	A4	A3	A2	A1	A0
White point Red	WPR	0C	0	0	A5	A4	A3	A2	A1	A0
White point Green	WPG	0D	0	0	A5	A4	A3	A2	A1	A0
White point Blue	WPB	0E	MAT	0	A5	A4	A3	A2	A1	A0
Peaking	PEAK	0F	0	0	A5	A4	A3	A2	A1	A0
Brightness	BRI	10	RBL	COR	A5	A4	A3	A2	A1	A0
Saturation	SAT	11	IE1	IE2	A5	A4	A3	A2	A1	A0
Contrast	CON	12	AFW	IFS	A5	A4	A3	A2	A1	A0
AGC Take over point	TOP	13	MOD	VSW	A5	A4	A3	A2	A1	A0
Volume control	VOL	14	SM	FAV	A5	A4	A3	A2	A1	A0
IF Frequency selection	IFFR	15	IF A	IFB	IFC	0	0	0	0	0
Vertical zoom	VX	16	0	0	A5	A4	A3	A2	A1	A0
Vertical scroll	VSC	17	0	0	A5	A4	A3	A2	A1	A0
Control 2		18	OSO	VSD	CB	BLS	BKS	CS1	CS0	BB
Control 3		19	HOB	BPS	ACL	CMB	AST	CL2	CL1	CL0
Control 4		1A	YD3	YD2	YD1	YD0	DS	DSA	FFI	EBS
Control 5		1B	0	0	0	0	0	0	0	FCO

4-2-4 Outcondition

The Outcondition Mode is used during factory inspection.

Function Reset	
1. System	Auto
2. Timer	Off
3. Blue Screen	Off
4.Noise Reduction	On
5. Child Lock	Off
6. Language	English

4-3 Other Adjustments

4-3-1 General Alignment Instructions

1. Usually, a color TV needs only slight touch-up adjustment upon installation. Check the basic characteristics such as height, horizontal and vertical sync and focus.
2. Observe the picture for good black and white details. There should be no objectionable color, shading : if color shading is present, perform the purity and convergence adjustments described below.
3. Use the specified test equipment or its equivalent.
4. Correct impedance matching is essential.
5. Avoid overload. Excessive signal from a sweep generator might overload the front-end of the TV. When inserting signal markers, do not allow the marker generator to distort test results.
6. Connect the TV only to an AC power source with voltage and frequency as specified on the back cover nameplate.
7. Do not attempt to connect or disconnect any wires while the TV is turned on. Make sure that the power cord is disconnected before replacing any parts.
8. To protect against shock hazard, use an isolation transformer.

4-3-2 Automatic Degaussing

A degaussing coil is mounted around the picture tube, so that external degaussing after moving the TV should be unnecessary. But the receiver must be properly degaussed upon installation.

The degaussing coil operates for about 1 second after the power is switched ON. If the set is moved or turned in a different direction, the power should be OFF for at least 10 minutes.

If the chassis or parts of the cabinet become magnetized, poor color purity will result. If this happens, use an external degaussing coil. Slowly move the degaussing coil around the faceplate of the picture tube and the sides and front of the receiver. Slowly withdraw the coil to

a distance of about 6 feet before turning power OFF.

If color shading persists, perform the following Color Purity and Convergence adjustments.

4-3-3 High Voltage Check

CAUTION : There is no high voltage adjustment chassis. The B+ power supply should be +8.5 volts (see table 1).

1. Connect a digital voltmeter to the second anode of the picture tube.
2. Turn on the TV. Set the Brightness and Contrast controls to minimum (zero beam current).
3. Adjust the Brightness and Contrast controls to both extremes.
   Ensure that the high voltage does not exceed Maximum High voltage (see table 1) under any conditions.

INCH	+B (Volts)	Maximum High Voltage
10	8.5	23 KV

Table 1 +B and Maximum High voltage

4-3-4 FOCUS Adjustment

1. Input a cross dot signal.
2. Adjust the tuning control for clearest picture.
3. Adjust the FOCUS control for well defined scanning lines in the center area of the screen.

4-3-5 Screen Adjustment

1. Tune to the ACTIVE channel.
2. Adjust the FACTORY key is pressed on Remote Controller, Factory Mode shows up.
3. Selected OSD color is red.
4. When the VOL+ key is pressed, the screen turns to one horizontal line.
5. Adjust SCREEN VR of FBT to make 1 dot bar.
6. After adjustment, once VOL+ key is pressed again, it turns to FACTORY Mode.

4-3-6 Purity Adjustment

1. Warm up the receiver for at least 30 minutes.
2. Plug in the CRT deflection yoke. Tighten the clamp screw.
3. Plug the convergence yoke into the CRT and set it as shown in Fig. B-1.
4. Input a black and white signal.
5. Fully demagnetize the receiver by using an external degaussing coil.

6. Turn the CONTRAST and BRIGHTNESS controls to maximum.
7. Loosen the clamp screw holding the yoke. Slide the yoke backward or forward to produce a vertical green belt. (Fig. B-2)
8. Tighten the convergence yoke.
9. Slowly move the deflection yoke forward. Adjust for the best overall green screen.
10. Temporarily tighten the deflection yoke.
11. Produce blue and red rasters by adjusting the-low-light controls.
    Check for good purity in each field.
12. Tighten the deflection yoke.

4-3-7 Center Convergence Adjustment

1. Warm up the receiver for at least 30 minutes.
2. Adjust the two tabs of the 4-pole magnets : Change the angle between them.
   Superimpose the red and blue vertical lines in the center area of the screen.
3. Adjust the BRIGHTNESS and CONTRAST controls for a well-defined picture.
4. Adjust the two tabs of the 4-pole magnets, and change the angle between them.
   Superimpose the red and the blue vertical lines in the center area of the screen.
5. Turn the both tabs at the same time, keeping the angle constant, and superimpose the red and blue horizontal lines in the center of the screen.
6. Adjust two-tabs of 6-pole magnets to superimpose the red and blue lines onto the green.
   Adjust the angle affects the vertical lines, and rotating both magnets affects the horizontal lines.
7. Repeat adjustments 2-6, if necessary.
8. Since the 4-pole and 6-pole magnets interact, the dot movement is complex(fig B-3).

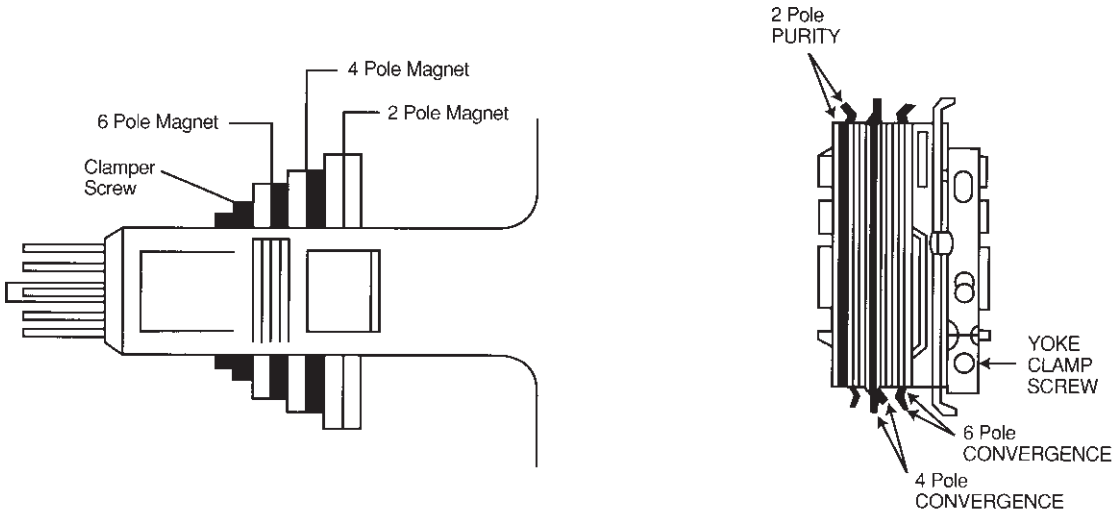


FIG. B-1 CONVERGENCE MAGNET ASSEMBLY

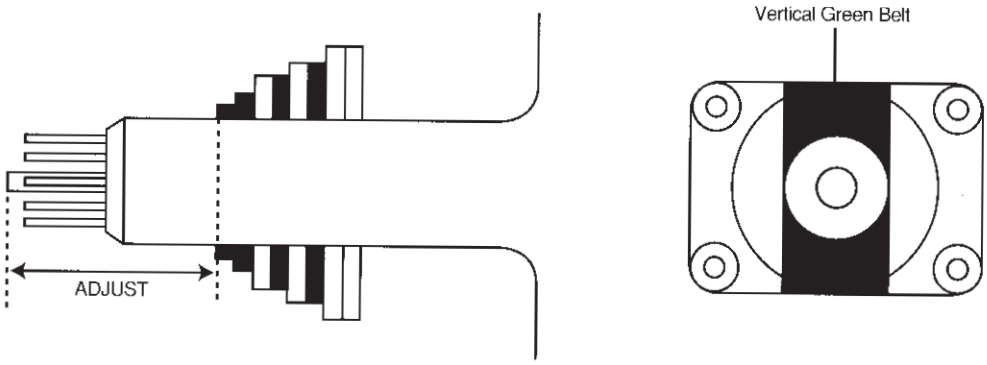


FIG. B-2 CENTER CONVERGENCE ADJUSTMENT

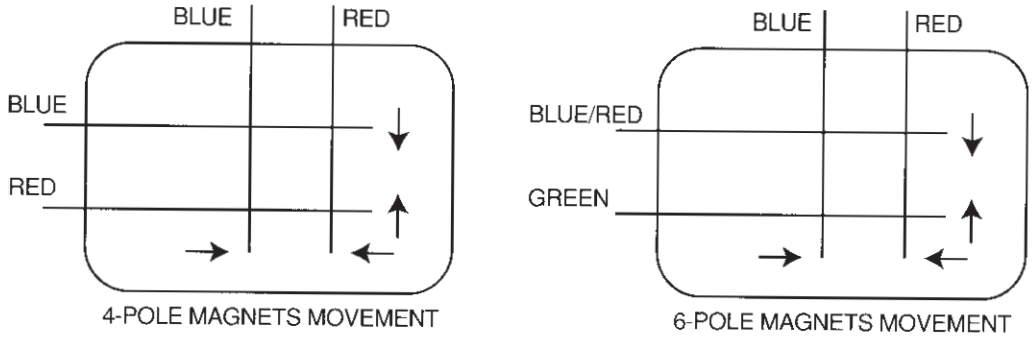


FIG. B-3 CENTER CONVERGENCE ADJUSTMENT

4-3-8 White Balance Adjustment

♣ **NOTE : The purpose of this procedure is to optimize the picture tube to obtain good black and white picture at all brightness levels while at the same time achieving maximum usable brightness. Purity and convergence adjustment must be processed in advance. Press the OUTCONDITION key on the remote control unit.**

1. On Factory Mode, select number 6. Test Pattern RF and by using VOL + key select White Pattern.
2. Press FACTORY key again to return to Factory Mode screen and select 3. White Balance.
3. In case of Screen adjustment, the color of horizontal bar can be used as a standard one and use other two colors to adjust W/B.(AC 100 equipment used)

4-3-9 RF AGC Adjustment

1. Input a VHF High(EU 7CH) channel (65dBuV)
2. Adjust the AGC in the Factory Mode.

4-3-10 Geometry Adjustment

1. Input a lion head or philips pattern.
2. Adjust V-SLOPE(VS). Align the center of the lion head or philips pattern with the center of the TV screen.
3. Adjust V-CENTER(VRS). Align the center of the lion head or philips pattern with the center of the TV screen.
4. Adjust V-HEIGHT(Height). Set the vertical size to "4-5".
5. Adjust H-PHASE(HRS). Align the center of the lion head or philips pattern with the center of the TV screen.

5. USING DEVICES AND DESCRIPTION

5-1 Main Signal Processor (TDA8842)

5-1-1 Feature

The following feature are available in all IC'S :

- Multi-standard vision IF circuit with PLL demodulator
- Alignment-free multi-standard FM sound demodulator (4.5MHz to 6.5MHz)
- Flexible source selection with CVBS switch and Y(CVBS)/C input so that a comb filter can be applied.
- Integrated chrominance trap circuit
- Integrated luminance delay line
- Asymmetrical Peaking in the luminance channel with a noise coring function
- Integrated chroma band pass filter with switchable center frequency
- RGB control circuit with "Continuous Cathode Calibration" and white point adjustment
- Possibility to insert a "Blue Back" option when no video signal is available
- Horizontal synchronization with two control loops and alignment - free horizontal oscillator
- Vertical count-down circuit
- Vertical driver optimized for DC-coupled vertical output stages
- I^2C-bus control of various functions

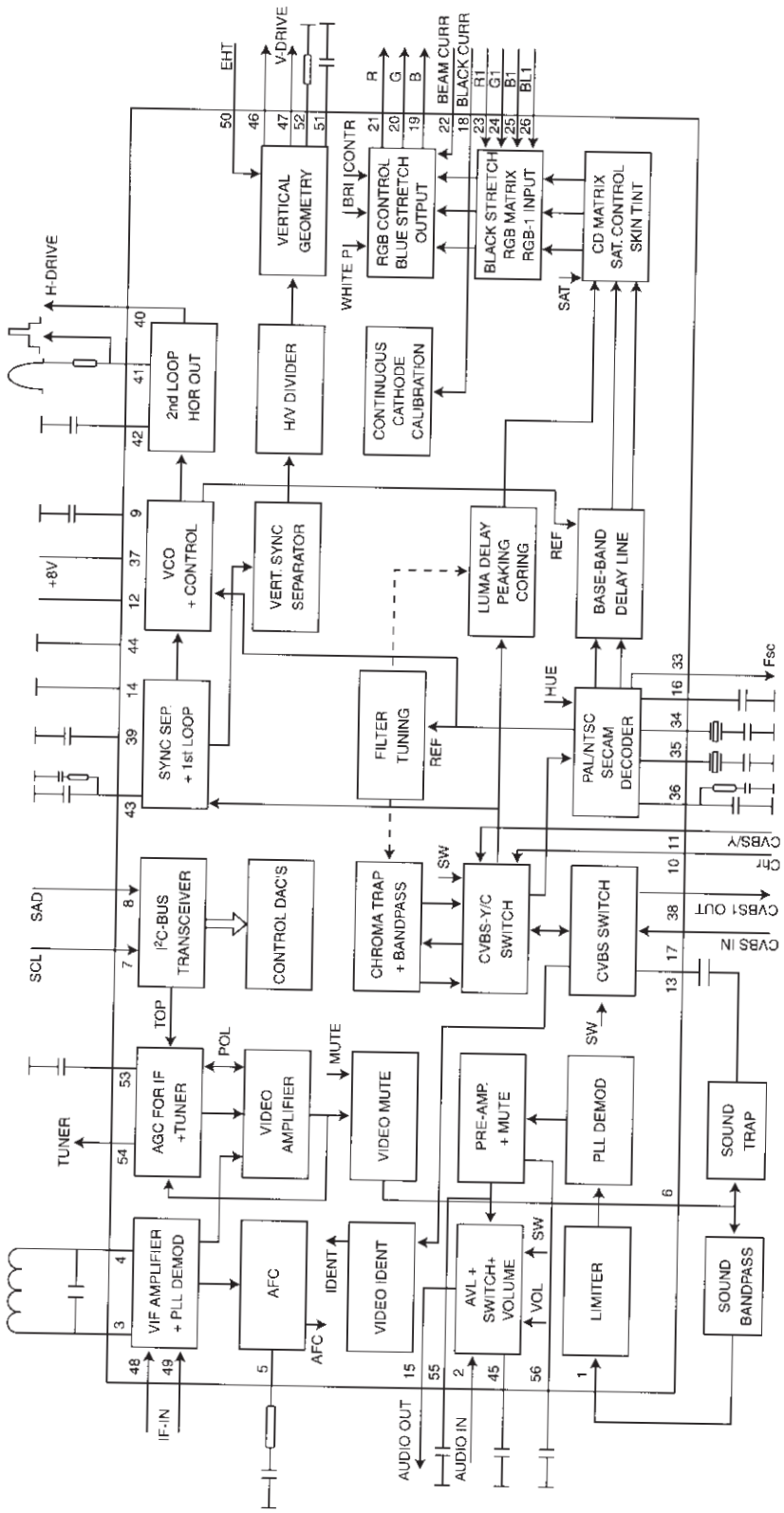
5-1-2 Pinning and Description

PIN	DESCRIPTION	PIN	DESCRIPTION
1	Sound IF input	29	(B-Y) signal output
2	External audio input	30	(R-Y) signal output
3	IF VCO tuned circuit 1	31	(B-Y) signal input
4	IF VCO tuned circuit 2	32	(R-Y) signal input
5	IF-PLL loop filter	33	Subcarrier reference output
6	IF video output	34	3.58MHz X-tal
7	Serial clock input	35	4.43NHz X-tal
8	Serial data input/output	36	Loop filter phase detector
9	Bandgap decoupling	37	2nd supply voltage 1 (+8V)
10	Chrominance input	38	CVBS-1 output
11	External CVBS	39	Decoupling digital supply
12	Main supply voltage 1 (+8V)	40	Horizontal output
13	Internal CVBS input	41	Flyback input/sandcastle output
14	Ground 1	42	Phase-2 filter
15	Audio output	43	Phase-1 filter
16	SECAM PLL decoupling	44	Ground 2
17	External CVBS input	45	East-west drive output
18	Black-current input	46	Vertical drive B output
19	Blue output	47	Vertical drive A output
20	Green output	48	IF input 1
21	Red output	49	IF input 2
22	Beam current limiter input	50	EHT/overvoltage protection input
23	Red input for insertion	51	Vertical sawtooth capacitor
24	Green input for insertion	52	Reference current input
25	Blue input for insertion	53	AGC decoupling capacitor
26	RGB insertion input	54	Tuner AGC output
27	Luminance input	55	Audio deemphasis
28	Luminance output	56	Decoupling sound demodulator

5-1-3 Block Diagram

I2C-bus controlled PAL/NTSC/SECAM TV Processors

TDA884X/5X-N1 series



5-1-4 Function Description

1. IF

- Alignment free IF-PLL, IF frequency selection via IIC-bus(no external coil need)
- Vision IF amplifier with high sensitivity and good figures for differential phase and gain
- PLL demodulator with high linearity offering the possibility for (single standard) intercarrier stereo audio application
- Alignment PLL via IIC-bus

2. Audio

- Alignment free multi standard PLL audio demodulator (4.5 to 6.5 MHz)
- Volume control

3. Video

- Integrated fixed luminance delay line
- Integrated chroma trap (auto calibrated)
- Integrated chroma bandpass filters with switchable center frequency (auto calibrated)
- Asymmetrical peaking circuit in the luminance channel with switchable noise coring function
- Black stretching of non standard CVBS or luminance signals, switchable via IIC-bus

4. RGB

- RGB control (brightness, contrast, saturation)
- Improved black current stabilization (continuos cathode calibration)
- White point adjustment
- Blue stretch which offsets colors near white to blue
- Option to insert "blue back" when no video signal is available

5. Input/Output

- Flexible video source select with CVBS input for the internal signal and two external video inputs (one switchable for CVBS or Y/C)
- The output signal of the video source select is externally available (also as CVBS when Y/C Y/C input is used)
- External audio input
- Linear RGB input with fast blanking

6. Synchronization and Deflection

- Horizontal synchronization with two control loops and alignment free horizontal oscillator
- Slow start and slow stop of the horizontal drive output to enable low stress start-up and Switch-off from the line circuit at nominal line supply voltage.
- Vertical count-down circuit for stable behavior with provisions for non-standard signals
- Vertical geometry control
- Vertical drive optimized for DC coupled vertical output stages

5-2 Vertical Output (TDA8356)

5-2-1 Feature

- Highly efficient fully DC-coupled vertical output bridge circuit
- Vertical flyback switch
- Protection against:

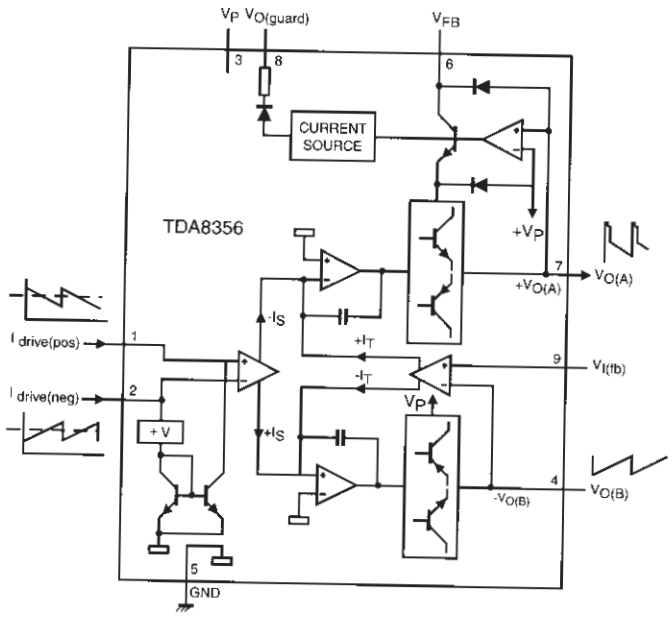
  Short-circuit of the output pins (7 and 4)

  Short-circuit of the output pins to Vp
- Temperature (thermal) protection
- High EMC immunity because of common mode inputs

5-2-2 Pinning and Description

PIN	DESCRIPTION
1	Input power stage (positive)
2	Input power stage (negative)
3	Operating supply voltage
4	Output voltage B
5	Ground
6	Input flyback supply voltage
7	Output voltage A
8	Guard output voltage
9	Input feedback voltage

5-2-3 Block Diagram



5-3 Triple Video Output Amplifier (TDA6107Q)

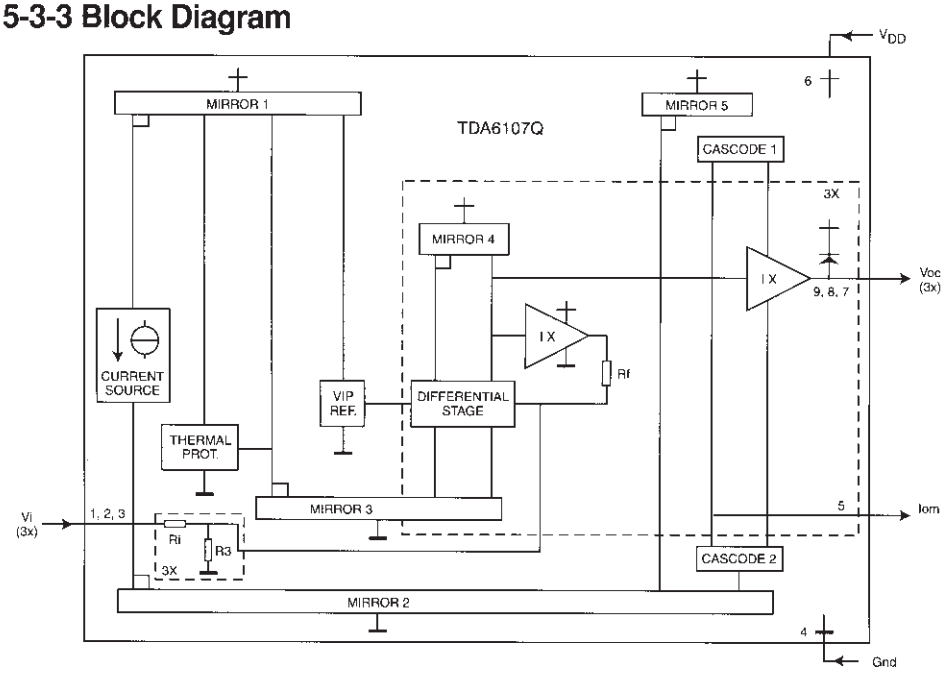
5-3-1 Feature

- Bandwidth : 4.0MHz typical at 100Vp-p
- Slewrate : 900 V/us
- Only one supply voltage
- Protection against ESD
- Black-current measurement output for automatic black current stabilization
- Internal reference voltage
- Thermal protection
- Controllable switch-off behavior

5-3-2 Pinning and Description

PIN	DESCRIPTION
1	Inverting input 1
2	Inverting input 2
3	Inverting input 3
4	Ground
5	BCS Output
6	Supply voltage
7	Cathode output 3
8	Cathode output 2
9	Cathode output 1

5-3-3 Block Diagram



5-4 L4964

5-4-1 Feature

- 4A Output current
- 5.1V to 28V output voltage range
- 0 to 100% duty cycle range
- Precise(±3%) on-chip reference
- Switching frequency up to 120KHz
- Very high efficiency (Up to 90%)
- Very few external components
- Soft start
- Reset output
- Current limiting
- Input for remote inhibit and synchronous pwm
- Thermal shutdown

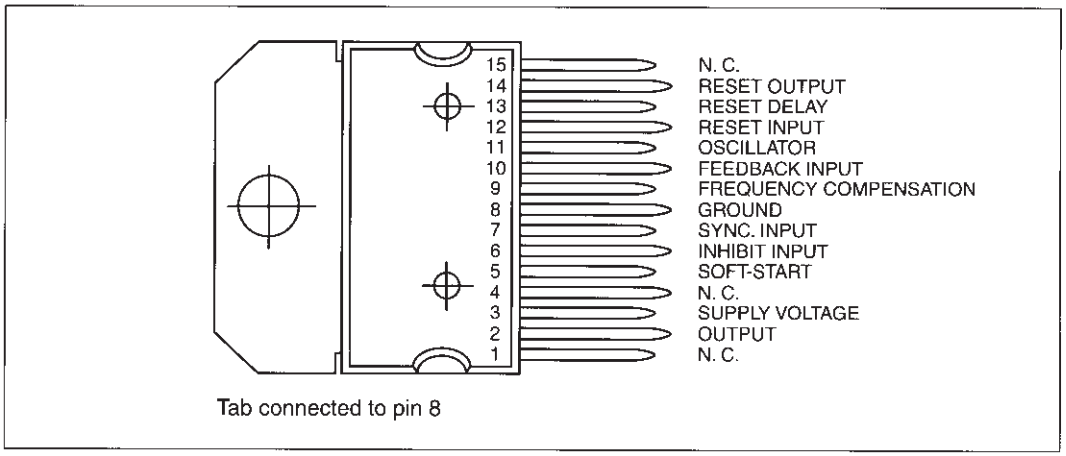
5-4-2 Description

The L4964 is a stepdown power switching regulator delivering 4A at a voltage variable from 5.1V to 28V. Features of the device include overload protection, soft start, remote inhibit, thermal protection, a reset output for microprocessors and a PWM comparator input for synchronization in multichip configurations.

The L4964 is mounted in a 15-lead Multiwatt® Plastic power package and requires very few external components.

Efficient operation at switching frequencies up to 120KHz allows a reduction in the size and cost of external filter components.

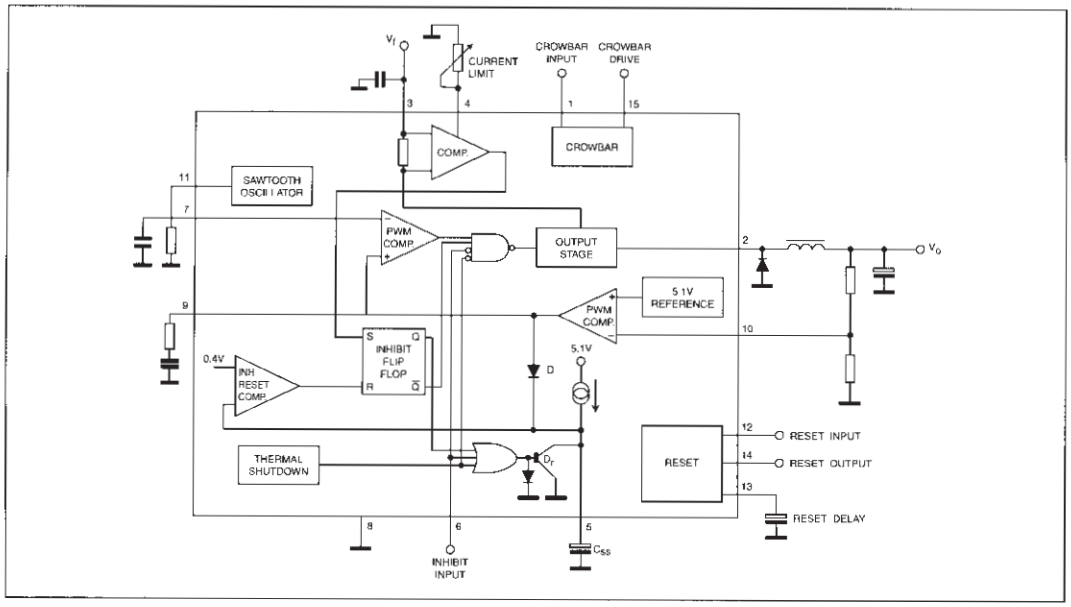
5-4-3 Pin Connection(top view)



5-4-4 Pin Function

N°	Name	Function
1	N. C.	Must not be connected. Leave open circuit.
2	Output	Regulator Output.
3	Supply Voltage	Unregulated Voltage Input. An internal regulator powers the L4964 internal logic.
4.	N. C.	Must not be connected. Leave open circuit.
5	Soft Start	Soft Start Time Constant. A capacitor is connected between this terminal and ground to define the soft start time constant. This capacitor also determines the average short circuit output current.
6	Inhibit Input	TTl-Level Remote Inhibit. A logic high level on this input disables the L4964.
7	Sync Input	Multiple L4964 are synchronized by connecting the pin 7 inputs together and omitting the oscillator RC network on all but one device.
8	Ground	Common Ground Terminal.
9	Frequency Compensation	A series RC network connected between this terminal and ground determines the regulation loop gain characteristics.
10	Feedback Input	The Feedback Terminal of the Regulation Loop. The output is connected directly to this terminal for 5.1V operation ; it is connected via a divider for higher voltages.
11	Oscillator	A parallel RC network connected to the terminal determines the switching frequency. The pin must be connected to pin 7 input when the internal oscillator is used.
12	Reset Input	Input of the Reset Circuit. The threshold is roughly 5V. It may be connected to the beedback point or via a divider to the input.
13	Reset Delay	A capacitor connected between this terminal and ground determines the reset signal delay time.
14	Reset Output	Open Collector Reset Signal Output. This output is high when the supply is safe.
15	N. C.	Must not be connected. Leave open circuit.

5-4-5 Block Diagram



5-5 TDA2007A

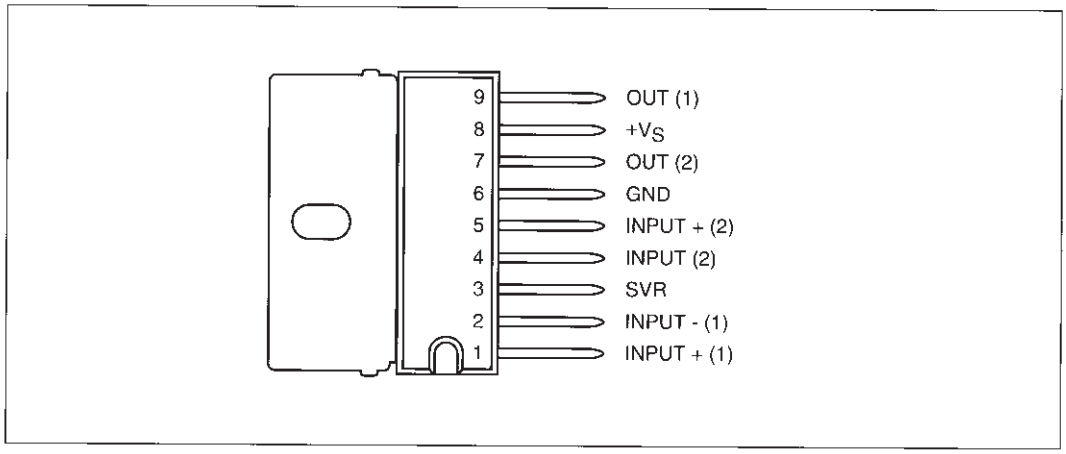
5-5-1 Feature

- High output power
- High current capability
- AC short circuit protection
- Thermal overload protection

5-5-2 Description

The TDA2007A is a class AB dual Audio power amcifer assembled in single in line 9 pins package, specially designed for stereo application in music centers TV receivers and portable radios.

5-5-3 Pin connection(top view)



5-5-4 Absolute Maximum Ratings

Symbol	Parameter	Value	Unit
V_S	Supply voltage	28	V
I_O	Output Peak Current(repetitive f≥20Hz)	3	A
I_O	Output Peak Current(non repetitive t = 100 Σμs)	3.5	A
P_{tot}	Power Dissipation at T_{case}=70℃	10	W
T_{stg}, T_j	Storage and Junction Temperature	-40 to 150	℃

5-5-5 Electrical Characteristics (refer to the stereo application circuit, T_{amb} = 25℃, V_S =18V, G_V = 36dB, unless otherwise specified)

Symbol	Parameter	Test Condition	Min.	Typ.	Max.	Unit
V_S	Supply Voltage		8		26	V
Vo	Quiescent Output Voltage			8.5		V
Id	Total Quiescent Drain Current			50	90	mA
Po	Output Power (each channel)	f = 100Hz to 6KHz d = 0.5% Vs = 18V R_L = 4Ω Vs = 22V R_L = 8W	 5.5 5.5	 6 6		 W W
d	Distortion (each channel)	f = 1KHz, Vs = 18V, R_L = 4Ω Po = 100mW to 3W f = 1KHz, Vs = 22V, R_L = 8Ω Po = 100mW to 3W		0.1 0.05		% %
CT	Cross Talk(ᵒᵒᵒ)	R_L = ∞, R_g = 10KΩ f = 1KHz f = 10KHz	 50 40	 60 50		 dB dB
V_i	Input Saturation Voltage(rms)		300			mV
R_i	Input Resistance	f = 1KHz	70	200		KΩ
f_L	Low Frequency Roll Off(-3dB)	R_L = 4Ω, C10 = C11 = 200μF		40		Hz
f_H	Low Frequency Roll Off(-3dB)			80		KHz
G_V	Voltage Gain (closed loop)	f = 1KHz	35.5	36	36.5	dB
ΔG_V	Closed Loop Gain Matching			0.5		dB
e_N	Total Input Noise Voltage	R_g = 100Ω(ᵒ)		1.5		μV
		R_g = 100Ω(ᵒᵒ)		2.5	8	μV
SVR	Supply Voltage Rejection (each channel)	R_g = 10KΩ f_{ripple} = 100Hz, V_{ripple} = 0.5V		55		dB
T_j	Thermal Shut-down Junction Temperature			145		℃

5-6 Video Select switch (NJM2235L)

5-6-1 Feature

- SIP-8Pin
- 3 input 1 output
- Built in clamp circuit
- Wide band width (10MHz)
- Crosstalk 70dB (at 4.43MHz)

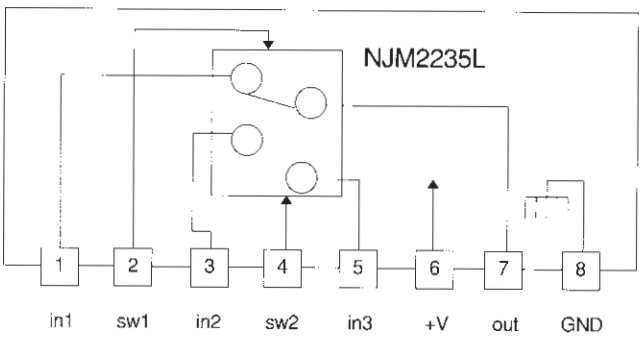
5-6-2 Pinning and Description

PIN	DESCRIPTION
1	Input 1
2	Switch 1
3	Input 2
4	Switch 2
5	Input 3
6	Supply voltage
7	Output
8	Ground

5-6-3 Control

SW 1	SW 2	OUTPUT
L	L	INPUT 1
H	L	INPUT 2
L/H	H	INPUT 3

5-6-4 Block Diagram



5-7 Teletext (SAA5281P)

5-7-1 Feature

- Single +5V power supply
- Both video and scan-related synchronization possible
- Direct RGB interface to standard color decoder Ics
- High quality display using a 12 × 10 character matrix
- Non-interlace display options for flicker reduction

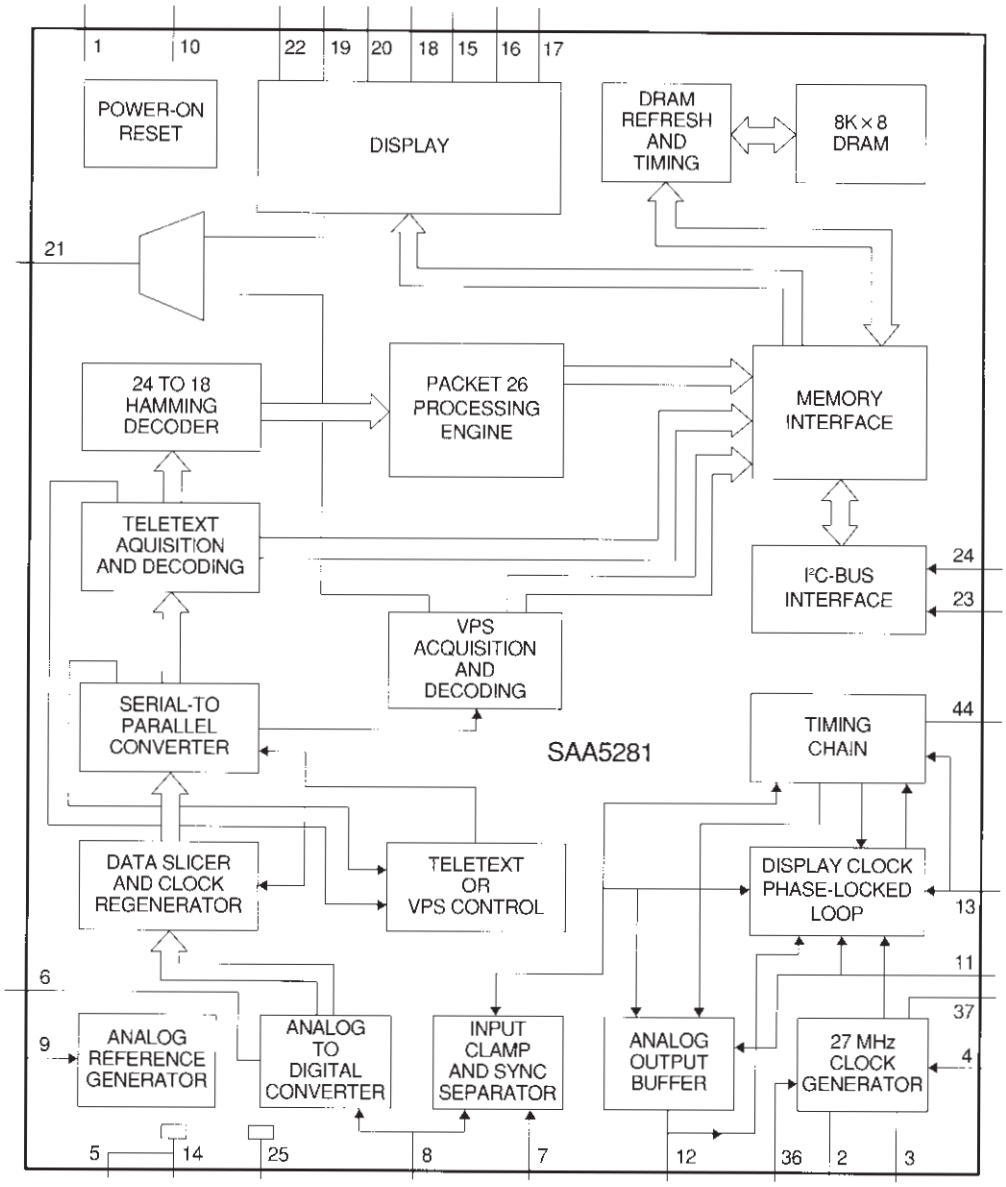
5-7-2 Pinning and Description

PIN	DESCRIPTION	PIN	DESCRIPTION
1	Power supply (+5V)	25	Ground
2	X-tal output (27MHz)	26	NC
3	X-tal input (27MHz)	27	NC
4	X-tal ground	28	NC
5	Ground	29	NC
6	Positive reference	30	NC
7	Video black level	31	NC
8	Composite video input	32	NC
9	Reference current input	33	NC
10	Power supply (+5V)	34	NC
11	NC	35	NC
12	NC	36	NC
13	Ground	37	NC
14	Ground	38	NC
15	Red color output	39	NC
16	Green color output	40	NC
17	Blue color output	41	NC
18	RGB reference	42	NC
19	Fast blanking	43	NC
20	NC	44	NC
21	Odd(low) / Even(high)	45	NC
22	NC	46	NC
23	SCL	47	NC
24	SDA	48	NC

5-7-3 Language Variants

LANGUAGE DESCRIPTION	DEVICE VARIANT
West European	E
East European	H
West European and Turkish	T
French and Arabic	K
Baltic and Cyrillic	R

5-7-4 Block Diagram



5-8 Power Circuit (TEA2262)

5-8-1 Feature

- Positive and negative output current up to 1A
- Low start - up current
- Direct drive of the MOS power transistor
- Two levels transistor current limitation
- Double pulse suppression
- Soft starting
- Under and over voltage lock - out
- Automatic stand - by mode
- Internal PWM signal generator

5-8-2 Description

The TEA2262 is a monolithic integrated circuit for the use in primary part of an off line switching mode power supply suing a MOS power transistor.

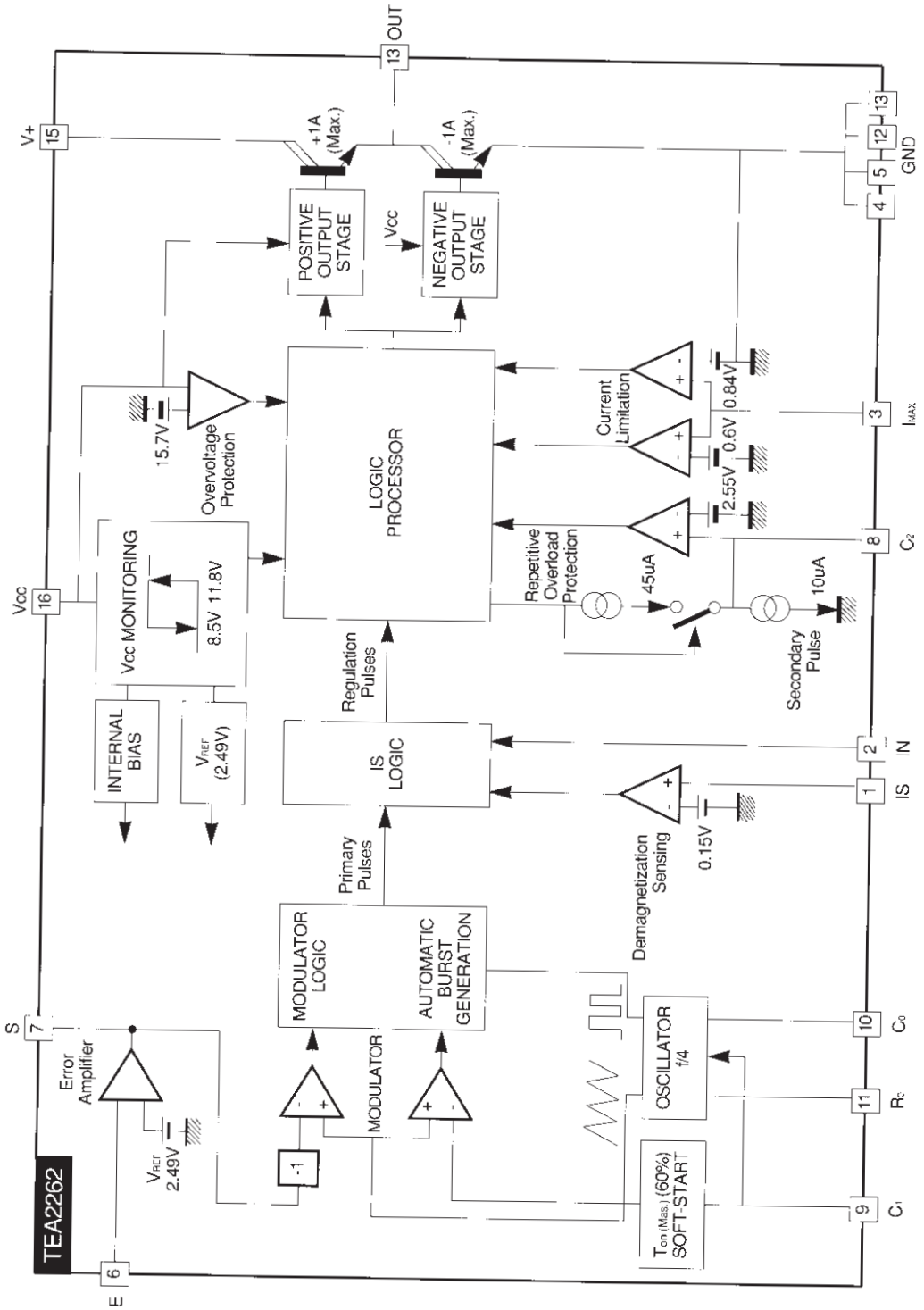
All function required for SMPS control under normal operating, transient or abnormal conditions are provided.

The capability of working according to the "master - slave" concept, or according to the "primary regulation" mode.

5-8-3 Pin Function

Symbol	Parameter	Value	Unit
Vcc	Power supply(#16 - #4, 5, 12, 13)	20	V
V+	Output Stage Power Supply(#15 - #4, 5, 12, 13)	20	V
Iout+	Positive Output Current(source current)	1.5	A
Iout-	Negative Output Current(sink current)	1.5	A
Ti	Operating Junction temperature	150	℃
Tstg	Storage Temperature	-40, +150	℃

5-8-4 Block Diagram



6. TECHNICAL STUDY (SMPS OPERATING DESCRIPTION)

6-1 Starting Mode - Stand By Mode

Power for circuit supply is taken from the mains through a high value resistor before starting. As long as Vcc of the TEA2262 is below Vcc start, the quiescent current is very low (typically 0.5mA) and the electrolytic capacitor across Vcc is linearly charged.

When Vcc reaches Vcc start(typically 11.8V), the circuit starts, generating output pulses with a soft-starting. Then the SMPS goes into stand - by mode and the output voltage is a percentage of the nominal output voltage(eg.80%).

During starting phase, in oder to avoid transformer magnetization (specially at high frequency) the frequency oscillator is divided by four.

At switch-on, Co charging current is divided by four.

It recover its normal value when the voltage of soft-start capacitor reach 2.5V.

The current also recover its standard value when the soft-start capacitor is discharged because of a burst operating mode (starting in starting in stand-by).

In other words the charging current will become and stay at its normal value, as soon as one of the following events occurs : -Vcl reach 2.5V - C1 is discharged by burst operating mode.

For this the TEA2262 contains all the functions frequency oscillator, a voltage reference, an error amplifier and a pause width modulator(PWM).

For transmission of low power with a good efficiency in stand-by, an automatic burst generation system is used, in order to avoid audible noise.

6-2 Normal Mode (secondary regulation)

The normal operating of the TV set is obtained by sending to the TEA2262 regulation pulses generated by a regulator located in the secondary side of the power supply(TEA5170 for example).

This architecture uses the "Master-slave Concept", advantages of which are now well-known especially the very high efficiency in stand-by mode, and the accurate regulation in normal mode.

Stand-by mode or normal mode are obtained by supplying or not the secondary regulator.

This can be ordonnered for example by a microprocessor in relation with the remote control unit.

Regulation pulses are applied to the TEA2262 through a small pause-transformer to the I IN input (pin 2). This input is sensitive to positive square pluses. The typical threahould of this input is 0.85V.

The frequency of pluses coming from the secondary regulator can be lower or higher than the frequency of the starting oscillator.

The TEA2262 has no soft - starting system when it receives pulses from the secondary.

The soft-starting has to be located in the secondary regulator.

Due to the principle of the primary regulation, pulses generated by the starting system automatically disappear when the voltage delivered by the SMPS increases.

STAND - BY MODE, NORMAL MODE TRANSITION

During the transition there are simultaneously pluses coming from the primary and secondary regulators.

These signals are not sysncyronized and some care has to be taken to ensure the safety of the switching power transistor.

A very sure and simple way consist in checking the transformer demagnetization state.

- A primary pulse is taken in account only if the transformer is demagnetized after a conduction of the power transistor required by the primary regulator.
- A secondary pulse is taken in account only if the transformer is demagnetized after a conduction of the power transistor required by the primary regulator.

With this arrangement the switching safety area of the power transistor is respected and there is no risk of transformer magnetization.

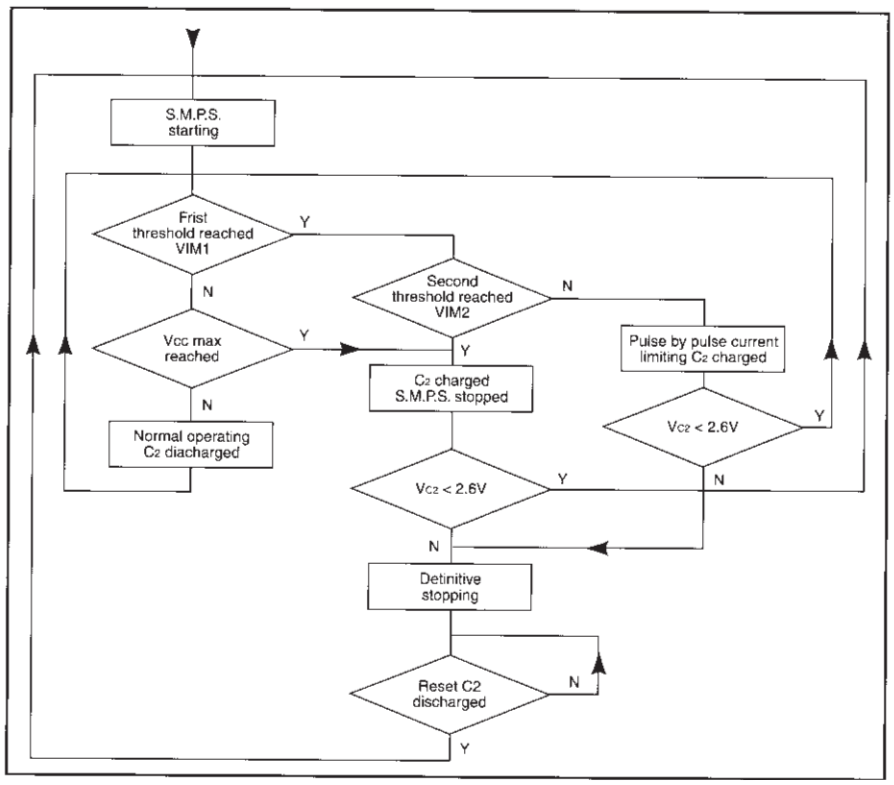
The magnetization state of the transformer is checked by sensing the voltage across a winding of the transformer(generally the same which supplied the TEA2262). This is made by connecting a resistor between this winding and the demagnetization sensing input of the circuit (pin 1).

6-3. Security Functions(see flow - chart below)

-Undervoltage detection. This protection works in association with the starting device "Vcc switch"(see paragraph Starting - mode - standby mode).

If Vcc is lower than Vcc stop (typically 8.5V) output pulses are inhibited, in order to avoid wrong operation of the power supply or bad power transistor drive.

Security Flow - Chart



6-4. Overvoltage detection

If Vcc exceeds Vcc max (typically 15.7V) output pulses are inhibited and the external capacitor C_2 is charged as long as Vcc is higher than Vcc stop.

Restarting of the power supply is obtained by reducing Vcc below Vcc stop except if the Voltage across C_2 reaches V_{C2} (typically 2.55V) (rafer to "Restart of the power supply" paragraph). In this last case, the circuit is definitively stopped.

6-5. Current limitation of the power transistor

The current is measured by a shunt resistor. A double threshold system is used :

- When the first threshold(V_{IM1}) is reached, the conduction of the power transistor is topped until the end of the period : a new conduction signal is needed to obtain conduction again.
- Furthermore as long as the first threshold an external capacitor C_2 is charged. When the voltage across the capacitor reaches V_{C2} (typically 2.55V) the output is inhibited. This is called the "repetitive overload protection". If the overload disappears before V_{C2} is reached, C_2 is discharged, so transient overloads are tolerated.
- Second current limitation threshold(V_{IM2}). When this threshold is reached the output of the circuit is immediately inhibited. This protection is helpful is helpful in case of hard overload for example to avoid the magnetization of the transformer.

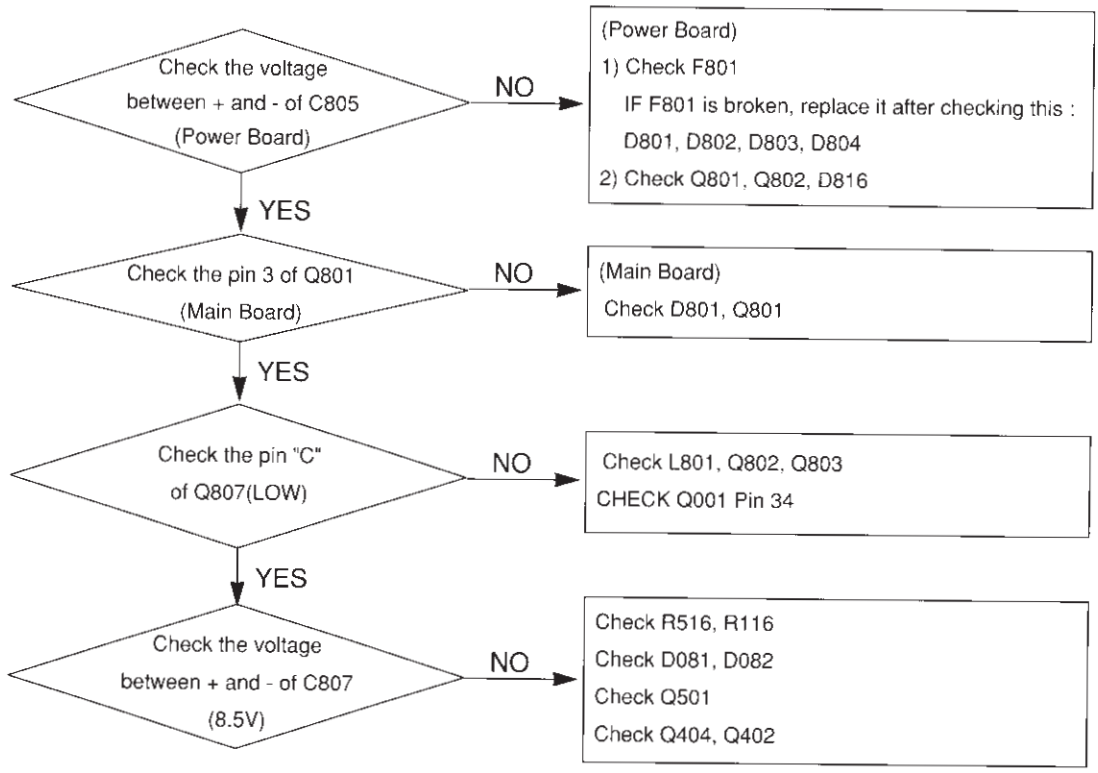
6-6. Restart of the power supply

After stopping due to V_{IM2} Vcc Max or Vcc stop triggering, restart of the power supply can be obtained by the normal operation of the Vcc switch sequency from Vcc stop to Vcc start.

After stopping due to V_{C2} threshold reaching, the circuit is definitively stoped. In this case it is necessary to reduce Vcc below approximately 5V to reset the circuit. From a practical point of view, it means that the power supply has to the temporarily disconnected from any power source to get the restart.

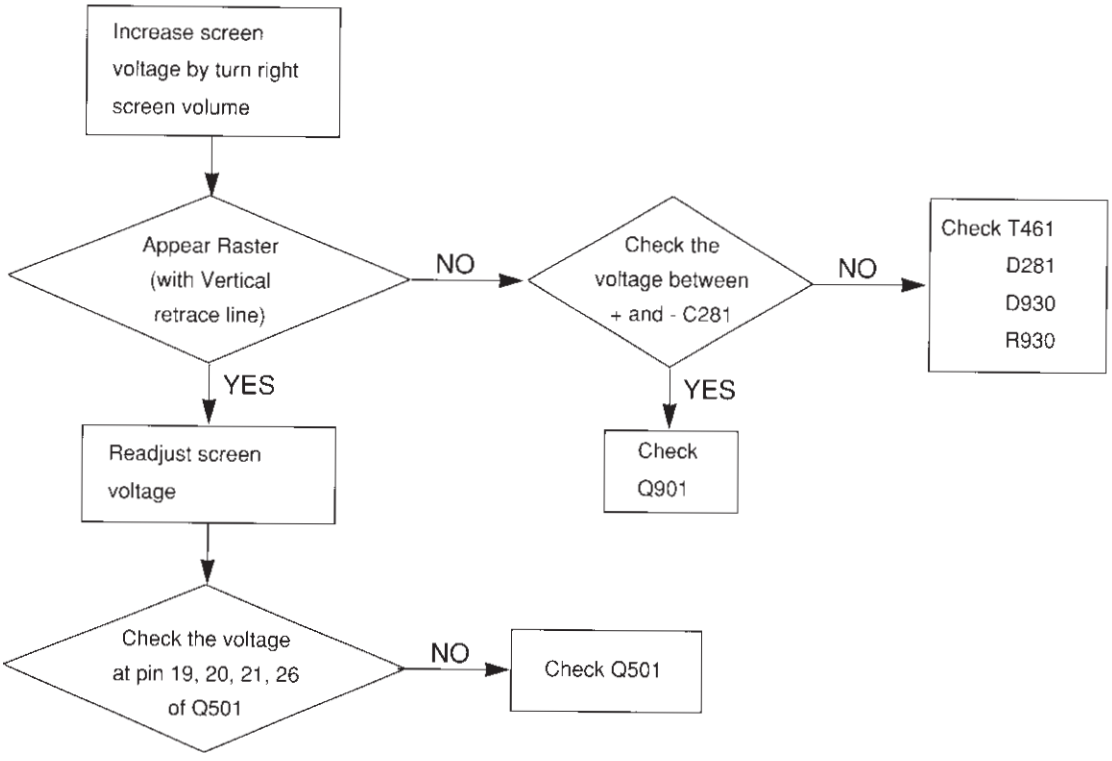
The following chart is for a trouble shooting which will assist you in finding out fault and load you to the correct stage. In order to utillize the chart (fault tree), first establish the complaint point (for example, No Rester, No sound). Locate the position of the complaint point and keep track of the arrow and progress through the various alternatives until a final blick indicates the defective components or stage.

7-1 No Power



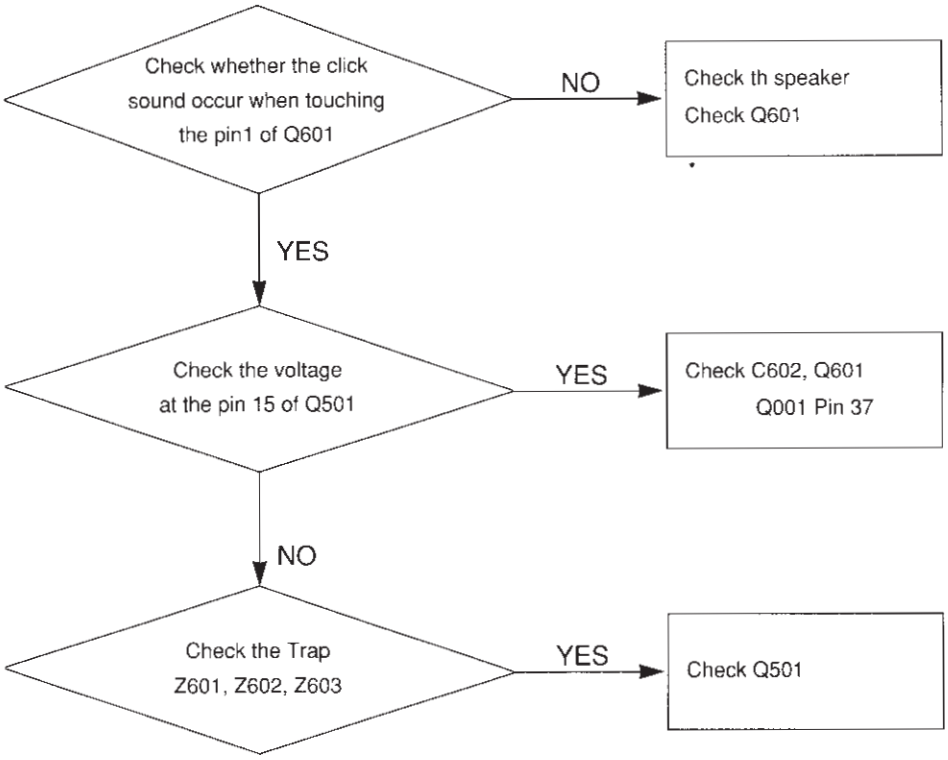
7-2 No Raster

Heater Voltage is OK but No Raster.

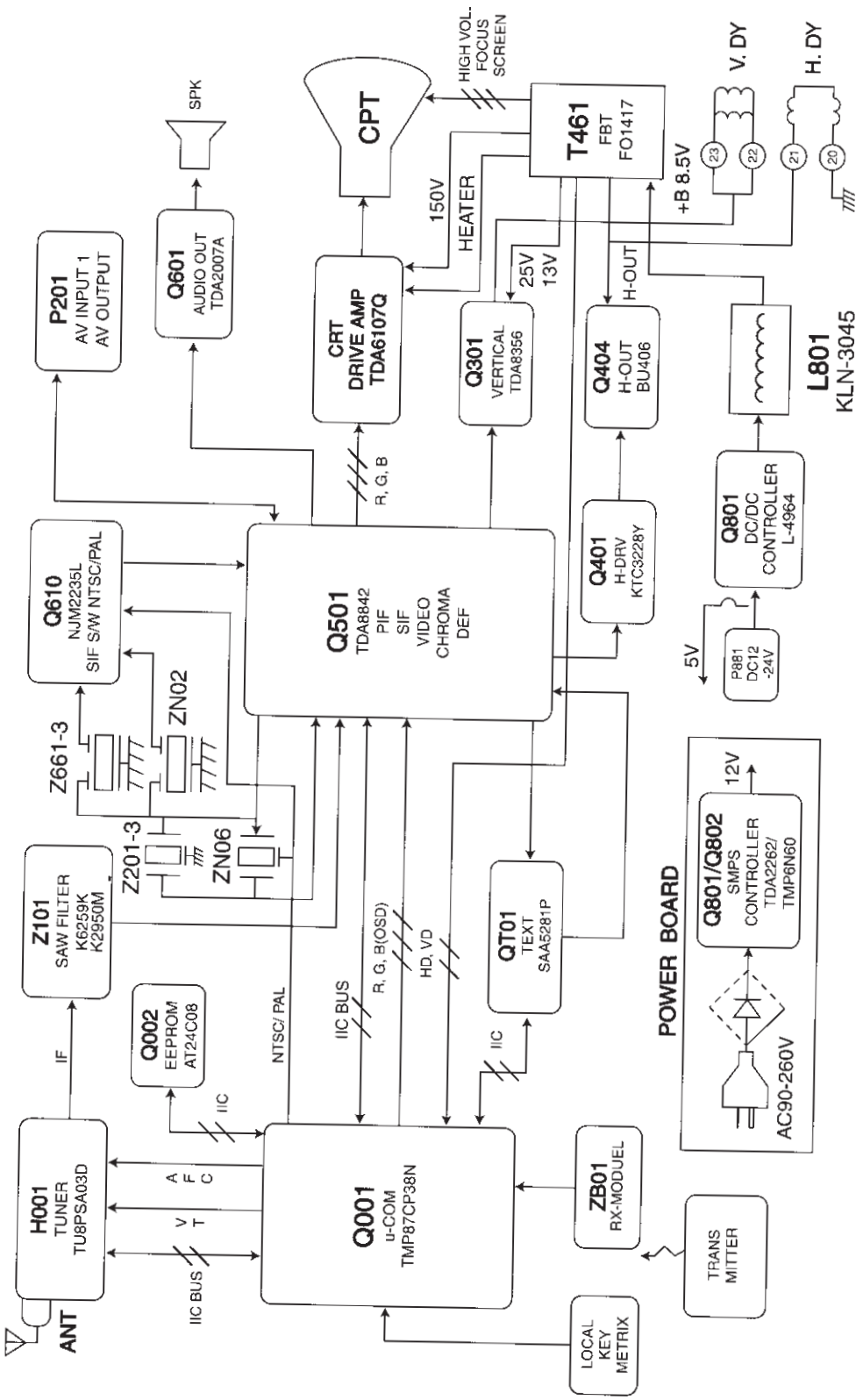


7-3 No Sound(Picture OK)

Do the volume control in max before check this routine.



8. BLOCK DIAGRAM



9. DIFFERENT PARTS LIST

◐ RF NTSC OPTION LIST ◑

NO	PARTS NO	NTSC/PAL/SECAM	PAL/SECAM	STATUAS
1	Z101	K6259K	K2955M	CHANGE
2	DN01	MA859	-	DELET
3	R164	27	-	CHANGE
4	RN11	2.2K	-	DELET
5	R167	10K	-	"
6	R169	75K	-	"
7	RN01	10K	-	"
8	RN02	270	-	"
9	RN04	6.8K	-	"
10	RN03	47K	-	"
11	RN12	10K	-	"
12	CN01	100 (AXIAL)	-	"
13	LN02	10UH (AXIAL)	-	"
14	QN01	KTC3198	-	"
15	QN02	KTC3198	-	"
16	QN03	KTA562	-	"
17	QN04	KTC3198	-	"
18	QN05	KTC3198	-	"
19	610	NJM2235L	-	"
20	ZN02	TPS4.5MC	-	"
21	ZN06	SFE4.5MCB	-	"
22	JN01	JUMP	-	"
23	JN02	JUMP	-	"
24	JN03	JUMP	-	"
25	JN04	JUMP	-	"
26	JN05	JUMP	-	
27	JN06	JUMP	-	
28			-	
29				
30				

P/NO	ITEM	ITEM NAME
	MAIN, PAL PTJM01 I10AJ6RST	
	MAIN, PAL PTJM01-1 I10AJ6RST	
C002	12474102T	CERAMIC CAP, B 50V 1000PF K AXIAL
C006	12473120T	CERAMIC CAP, SL 50V 12PF J AXIAL
C007	12473100T	CERAMIC CAP, SL 50V 10PF J AXIAL
C010	12474331T	CERAMIC CAP, B 50V 330PF K AXIAL
C081	12497103T	CERAMIC CAP, F 25V 0.01MF Z AXIAL
C161	12497103T	CERAMIC CAP, F 25V 0.01MF Z AXIAL
C162	12497103T	CERAMIC CAP, F 25V 0.01MF Z AXIAL
C163	12497103T	CERAMIC CAP, F 25V 0.01MF Z AXIAL
C165	12474101T	CERAMIC CAP, B 50V 100PF K AXIAL
C223	12474101T	CERAMIC CAP, B 50V 100PF K AXIAL
C304	12474102T	CERAMIC CAP, B 50V 1000PF K AXIAL
C305	12474102T	CERAMIC CAP, B 50V 1000PF K AXIAL
C401	12474391T	CERAMIC CAP, B 50V 390PF K AXIAL
C413	12474102T	CERAMIC CAP, B 50V 1000PF K AXIAL
C605	12497103T	CERAMIC CAP, F 25V 0.01MF Z AXIAL
C606	12497103T	CERAMIC CAP, F 25V 0.01MF Z AXIAL
CV11	12497103T	CERAMIC CAP, F 25V 0.01MF Z AXIAL
D001	11115024T	SILICON DIODE, 1N4148
D002	11115024T	SILICON DIODE, 1N4148
D003	11115024T	SILICON DIODE, 1N4148
D030	11115024T	SILICON DIODE, 1N4148
D080	11115373T	ZD, MTZ8.2B VZ=7.78-8.19V 0.5W
D081	11115373T	ZD, MTZ8.2B VZ=7.78-8.19V 0.5W
D101	11115421T	ZD, MTZ33B VZ=30.32-31.88V 0.5W
D103	11115024T	SILICON DIODE, 1N4148
D230	11115024T	SILICON DIODE, 1N4148
D232	11115024T	SILICON DIODE, 1N4148
D281	11115224T	DIODE, FAST RECOVERY 1N4937
D291	11115364T	ZD, MTZ6.2B VZ=5.96-6.27V 0.5W
D292	11115224T	DIODE, FAST RECOVERY 1N4937
D301	11115024T	SILICON DIODE, 1N4148
D381	11115224T	DIODE, FAST RECOVERY 1N4937
D382	11115224T	DIODE, FAST RECOVERY 1N4937
D401	11115370T	ZD, MTZ7.5B VZ=7.07-7.45V 0.5W
D402	11115224T	DIODE, FAST RECOVERY 1N4937
D620	11115024T	SILICON DIODE, 1N4148
D811	11115421T	ZD, MTZ33B VZ=30.32-31.88V 0.5W
DT01	11115024T	SILICON DIODE, 1N4148
DT02	11115024T	SILICON DIODE, 1N4148
DT03	11115024T	SILICON DIODE, 1N4148
DT04	11115024T	SILICON DIODE, 1N4148
DV11	11115370T	ZD, MTZ7.5B VZ=7.07-7.45V 0.5W
DV16	11115370T	ZD, MTZ7.5B VZ=7.07-7.45V 0.5W
EL01	11061303	EYELET, HTR 2.80*2.9 SNI
EL02	11061303	EYELET, HTR 2.80*2.9 SNI
EL03	11061303	EYELET, HTR 2.80*2.9 SNI
EL04	11061303	EYELET, HTR 2.80*2.9 SNI
EL05	11061303	EYELET, HTR 2.80*2.9 SNI
EL06	11061303	EYELET, HTR 2.80*2.9 SNI
EL07	11061303	EYELET, HTR 2.80*2.9 SNI
EL08	11061303	EYELET, HTR 2.80*2.9 SNI
EL09	11061303	EYELET, HTR 2.80*2.9 SNI
EL10	11061303	EYELET, HTR 2.80*2.9 SNI
EL11	11061303	EYELET, HTR 2.80*2.9 SNI
EL12	11061303	EYELET, HTR 2.80*2.9 SNI
ES01	11061202	EYELET, HTR 2.11*2.8 SNI
ES02	11061202	EYELET, HTR 2.11*2.8 SNI
ES03	11061202	EYELET, HTR 2.11*2.8 SNI
ES04	11061202	EYELET, HTR 2.11*2.8 SNI
ES05	11061202	EYELET, HTR 2.11*2.8 SNI
ES06	11061202	EYELET, HTR 2.11*2.8 SNI
ES07	11061202	EYELET, HTR 2.11*2.8 SNI
ES08	11061202	EYELET, HTR 2.11*2.8 SNI
ES09	11061202	EYELET, HTR 2.11*2.8 SNI
ES10	11061202	EYELET, HTR 2.11*2.8 SNI
J001	11183004	PLATING WIRE, 0.6MM
J002	11183004	PLATING WIRE, 0.6MM
J003	11183004	PLATING WIRE, 0.6MM
J004	11183004	PLATING WIRE, 0.6MM
J005	11183004	PLATING WIRE, 0.6MM
J006	11183004	PLATING WIRE, 0.6MM
J007	11183004	PLATING WIRE, 0.6MM
J008	11183004	PLATING WIRE, 0.6MM
J009	11183004	PLATING WIRE, 0.6MM
J010	11183004	PLATING WIRE, 0.6MM
J011	11183004	PLATING WIRE, 0.6MM
J012	11183004	PLATING WIRE, 0.6MM
J013	11183004	PLATING WIRE, 0.6MM
J014	11183004	PLATING WIRE, 0.6MM
J015	11183004	PLATING WIRE, 0.6MM
J016	11183004	PLATING WIRE, 0.6MM
J017	11183004	PLATING WIRE, 0.6MM
J018	11183004	PLATING WIRE, 0.6MM
J019	11183004	PLATING WIRE, 0.6MM
J020	11183004	PLATING WIRE, 0.6MM
J021	11183004	PLATING WIRE, 0.6MM
J022	11183004	PLATING WIRE, 0.6MM
J023	11183004	PLATING WIRE, 0.6MM
J024	11183004	PLATING WIRE, 0.6MM
J025	11183004	PLATING WIRE, 0.6MM
J026	11183004	PLATING WIRE, 0.6MM
J027	11183004	PLATING WIRE, 0.6MM
J028	11183004	PLATING WIRE, 0.6MM
J029	11183004	PLATING WIRE, 0.6MM
J030	11183004	PLATING WIRE, 0.6MM
J031	11183004	PLATING WIRE, 0.6MM
J032	11183004	PLATING WIRE, 0.6MM
J033	11183004	PLATING WIRE, 0.6MM
J034	11183004	PLATING WIRE, 0.6MM
J035	11183004	PLATING WIRE, 0.6MM
J036	11183004	PLATING WIRE, 0.6MM
J037	11183004	PLATING WIRE, 0.6MM
J038	11183004	PLATING WIRE, 0.6MM
J039	11183004	PLATING WIRE, 0.6MM
J040	11183004	PLATING WIRE, 0.6MM
J041	11183004	PLATING WIRE, 0.6MM
J042	11183004	PLATING WIRE, 0.6MM
J043	11183004	PLATING WIRE, 0.6MM
J044	11183004	PLATING WIRE, 0.6MM
J045	11183004	PLATING WIRE, 0.6MM
J046	11183004	PLATING WIRE, 0.6MM
J047	11183004	PLATING WIRE, 0.6MM
J048	11183004	PLATING WIRE, 0.6MM
J049	11183004	PLATING WIRE, 0.6MM
J050	11183004	PLATING WIRE, 0.6MM
J051	11183004	PLATING WIRE, 0.6MM
J052	11183004	PLATING WIRE, 0.6MM
J053	11183004	PLATING WIRE, 0.6MM
J054	11183004	PLATING WIRE, 0.6MM
J055	11183004	PLATING WIRE, 0.6MM
J056	11183004	PLATING WIRE, 0.6MM
J057	11183004	PLATING WIRE, 0.6MM
J058	11183004	PLATING WIRE, 0.6MM
J059	11183004	PLATING WIRE, 0.6MM
J060	11183004	PLATING WIRE, 0.6MM
J061	11183004	PLATING WIRE, 0.6MM
J062	11183004	PLATING WIRE, 0.6MM
J063	11183004	PLATING WIRE, 0.6MM
J064	11183004	PLATING WIRE, 0.6MM
J065	11183004	PLATING WIRE, 0.6MM
J066	11183004	PLATING WIRE, 0.6MM
J067	11183004	PLATING WIRE, 0.6MM

P/NO	ITEM	ITEM NAME
J068	11183004	PLATING WIRE, 0.6MM
J069	11183004	PLATING WIRE, 0.6MM
J070	11183004	PLATING WIRE, 0.6MM
J071	11183004	PLATING WIRE, 0.6MM
J072	11183004	PLATING WIRE, 0.6MM
J073	11183004	PLATING WIRE, 0.6MM
J074	11183004	PLATING WIRE, 0.6MM
J075	11183004	PLATING WIRE, 0.6MM
J076	11183004	PLATING WIRE, 0.6MM
J077	11183004	PLATING WIRE, 0.6MM
J078	11183004	PLATING WIRE, 0.6MM
J079	11183004	PLATING WIRE, 0.6MM
J080	11183004	PLATING WIRE, 0.6MM
J081	11183004	PLATING WIRE, 0.6MM
J082	11183004	PLATING WIRE, 0.6MM
J083	11183004	PLATING WIRE, 0.6MM
J084	11183004	PLATING WIRE, 0.6MM
J085	11183004	PLATING WIRE, 0.6MM
J086	11183004	PLATING WIRE, 0.6MM
J087	11183004	PLATING WIRE, 0.6MM
J088	11183004	PLATING WIRE, 0.6MM
J089	11183004	PLATING WIRE, 0.6MM
J090	11183004	PLATING WIRE, 0.6MM
J091	11183004	PLATING WIRE, 0.6MM
JT01	11183004	PLATING WIRE, 0.6MM
JT02	11183004	PLATING WIRE, 0.6MM
JT03	11183004	PLATING WIRE, 0.6MM
L080	11237100T	COIL, AXIAL LAL02TB 10UH K
L110	11237829T	COIL, AXIAL LAL02TB 8.2UH K
L111	11237829T	COIL, AXIAL LAL02TB 8.2UH K
L161	11237479T	COIL, AXIAL LAL02TB 4.7UH K
L201	11237100T	COIL, AXIAL LAL02TB 10UH K
L202	11237829T	COIL, AXIAL LAL02TB 8.2UH K
L404	11103041T	BEAD CORE, BFS 3565A0F (3.5*6.5)
L602	11237479T	COIL, AXIAL LAL02TB 4.7UH K
LT01	11237479T	COIL, AXIAL LAL02TB 4.7UH K
LT02	11237109T	COIL, AXIAL LAL02TB 1UH K
N001	11965058	TAPE, TESAKREPP-4387 6.0MM*5000M
N002	11965057	TAPE, YW-5006 6.2MM*5000M ROLL
R001	12368103T	CARBON RESISTOR, SB 1/6W 10K OHM J
R003	12368472T	CARBON RESISTOR, SB 1/6W 4.7K OHM J
R004	12368472T	CARBON RESISTOR, SB 1/6W 4.7K OHM J
R005	12368103T	CARBON RESISTOR, SB 1/6W 10K OHM J
R008	12368103T	CARBON RESISTOR, SB 1/6W 10K OHM J
R009	12368103T	CARBON RESISTOR, SB 1/6W 10K OHM J
R010	12368103T	CARBON RESISTOR, SB 1/6W 10K OHM J
R011	12368101T	CARBON RESISTOR, SB 1/6W 100 OHM J
R012	12368101T	CARBON RESISTOR, SB 1/6W 100 OHM J
R013	12368472T	CARBON RESISTOR, SB 1/6W 4.7K OHM J
R015	12368101T	CARBON RESISTOR, SB 1/6W 100 OHM J
R016	12368101T	CARBON RESISTOR, SB 1/6W 100 OHM J
R017	12368472T	CARBON RESISTOR, SB 1/6W 4.7K OHM J
R018	12368472T	CARBON RESISTOR, SB 1/6W 4.7K OHM J
R019	12368472T	CARBON RESISTOR, SB 1/6W 4.7K OHM J
R020	12368103T	CARBON RESISTOR, SB 1/6W 10K OHM J
R021	12368103T	CARBON RESISTOR, SB 1/6W 10K OHM J
R022	12368103T	CARBON RESISTOR, SB 1/6W 10K OHM J
R026	12368103T	CARBON RESISTOR, SB 1/6W 10K OHM J
R027	12368561T	CARBON RESISTOR, SB 1/6W 560 OHM J
R028	12368472T	CARBON RESISTOR, SB 1/6W 4.7K OHM J
R029	12368151T	CARBON RESISTOR, SB 1/6W 150 OHM J
R030	12368270T	CARBON RESISTOR, SB 1/6W 27 OHM J
R031	12368103T	CARBON RESISTOR, SB 1/6W 10K OHM J
R032	12368103T	CARBON RESISTOR, SB 1/6W 10K OHM J
R035	12368103T	CARBON RESISTOR, SB 1/6W 10K OHM J
R036	12368103T	CARBON RESISTOR, SB 1/6W 10K OHM J
R051	12368101T	CARBON RESISTOR, SB 1/6W 100 OHM J
R052	12368101T	CARBON RESISTOR, SB 1/6W 100 OHM J
R053	12368101T	CARBON RESISTOR, SB 1/6W 100 OHM J
R054	12368471T	CARBON RESISTOR, SB 1/6W 470 OHM J
R080	12368472T	CARBON RESISTOR, SB 1/6W 4.7K OHM J
R108	12321223T	OXIDE RESISTOR, B 1/2W 22K OHM J
R109	12321223T	OXIDE RESISTOR, B 1/2W 22K OHM J
R112	12368103T	CARBON RESISTOR, SB 1/6W 10K OHM J
R113	12368153T	CARBON RESISTOR, SB 1/6W 15K OHM J
R114	12368183T	CARBON RESISTOR, SB 1/6W 18K OHM J
R115	12368202T	CARBON RESISTOR, SB 1/6W 2K OHM J
R116	12321479T	OXIDE RESISTOR, B 1/2W 4.7 OHM J
R161	12368750T	CARBON RESISTOR, SB 1/6W 75 OHM J
R162	12368472T	CARBON RESISTOR, SB 1/6W 4.7K OHM J
R163	12368102T	CARBON RESISTOR, SB 1/6W 1K OHM J
R164	12368270T	CARBON RESISTOR, SB 1/6W 27 OHM J
R165	12368471T	CARBON RESISTOR, SB 1/6W 470 OHM J
R166	12368121T	CARBON RESISTOR, SB 1/6W 120 OHM J
R201	12368471T	CARBON RESISTOR, SB 1/6W 470 OHM J
R202	12368100T	CARBON RESISTOR, SB 1/6W 10 OHM J
R203	12368181T	CARBON RESISTOR, SB 1/6W 180 OHM J
R204	12368151T	CARBON RESISTOR, SB 1/6W 150 OHM J
R205	12368151T	CARBON RESISTOR, SB 1/6W 150 OHM J
R206	12368241T	CARBON RESISTOR, SB 1/6W 240 OHM J
R209	12368102T	CARBON RESISTOR, SB 1/6W 1K OHM J
R210	12368221T	CARBON RESISTOR, SB 1/6W 220 OHM J
R211	12368221T	CARBON RESISTOR, SB 1/6W 220 OHM J
R212	12368391T	CARBON RESISTOR, SB 1/6W 390 OHM J
R221	12368103T	CARBON RESISTOR, SB 1/6W 10K OHM J
R225	12368109T	CARBON RESISTOR, SB 1/6W 1 OHM J
R226	12368102T	CARBON RESISTOR, SB 1/6W 1K OHM J
R227	12368680T	CARBON RESISTOR, SB 1/6W 68 OHM J
R228	12368470T	CARBON RESISTOR, SB 1/6W 47 OHM J
R230	12368623T	CARBON RESISTOR, SB 1/6W 62K OHM J
R234	12368163T	CARBON RESISTOR, SB 1/6W 16K OHM J
R291	12368243T	CARBON RESISTOR, SB 1/6W 24K OHM J
R292	12368682T	CARBON RESISTOR, SB 1/6W 6.8K OHM J
R301	12368393T	CARBON RESISTOR, SB 1/6W 39K OHM J
R302	12368242T	CARBON RESISTOR, SB 1/6W 2.4K OHM J
R303	12321229T	OXIDE RESISTOR, B 1/2W 2.2 OHM J
R304	12321220T	OXIDE RESISTOR, B 1/2W 22 OHM J
R305	12321229T	OXIDE RESISTOR, B 1/2W 2.2 OHM J
R307	12321331T	OXIDE RESISTOR, B 1/2W 330 OHM J
R321	12321471T	OXIDE RESISTOR, B 1/2W 470 OHM J
R381	12321279T	OXIDE RESISTOR, B 1/2W 2.7 OHM J
R400	12368302T	CARBON RESISTOR, SB 1/6W 3K OHM J
R401	12368101T	CARBON RESISTOR, SB 1/6W 100 OHM J
R402	12368472T	CARBON RESISTOR, SB 1/6W 4.7K OHM J
R403	12368151T	CARBON RESISTOR, SB 1/6W 150 OHM J
R404	12321680T	OXIDE RESISTOR, B 1/2W 68 OHM J
R405	12368270T	CARBON RESISTOR, SB 1/6W 27 OHM J
R407	12368104T	CARBON RESISTOR, SB 1/6W 100K OHM J
R408	12368273T	CARBON RESISTOR, SB 1/6W 27K OHM J
R409	12368153T	CARBON RESISTOR, SB 1/6W 15K OHM J
R410	12368183T	CARBON RESISTOR, SB 1/6W 18K OHM J
R411	12368471T	CARBON RESISTOR, SB 1/6W 470 OHM J
R421	12321479T	OXIDE RESISTOR, B 1/2W 4.7 OHM J
R501	12368101T	CARBON RESISTOR, SB 1/6W 100 OHM J
R502	12368101T	CARBON RESISTOR, SB 1/6W 100 OHM J
R503	12368101T	CARBON RESISTOR, SB 1/6W 100 OHM J
R508	12368104T	CARBON RESISTOR, SB 1/6W 100K OHM J
R516	12321100T	OXIDE RESISTOR, B 1/2W 10 OHM J
R601	12368271T	CARBON RESISTOR, SB 1/6W 270 OHM J
R602	12368271T	CARBON RESISTOR, SB 1/6W 270 OHM J
R604	12368153T	CARBON RESISTOR, SB 1/6W 15K OHM J
R605	12368332T	CARBON RESISTOR, SB 1/6W 3.3K OHM J
R611	12368390T	CARBON RESISTOR, SB 1/6W 39 OHM J
R612	12368390T	CARBON RESISTOR, SB 1/6W 39 OHM J
R613	12368152T	CARBON RESISTOR, SB 1/6W 1.5K OHMJ
R614	12368109T	CARBON RESISTOR, SB 1/6W 1 OHM J

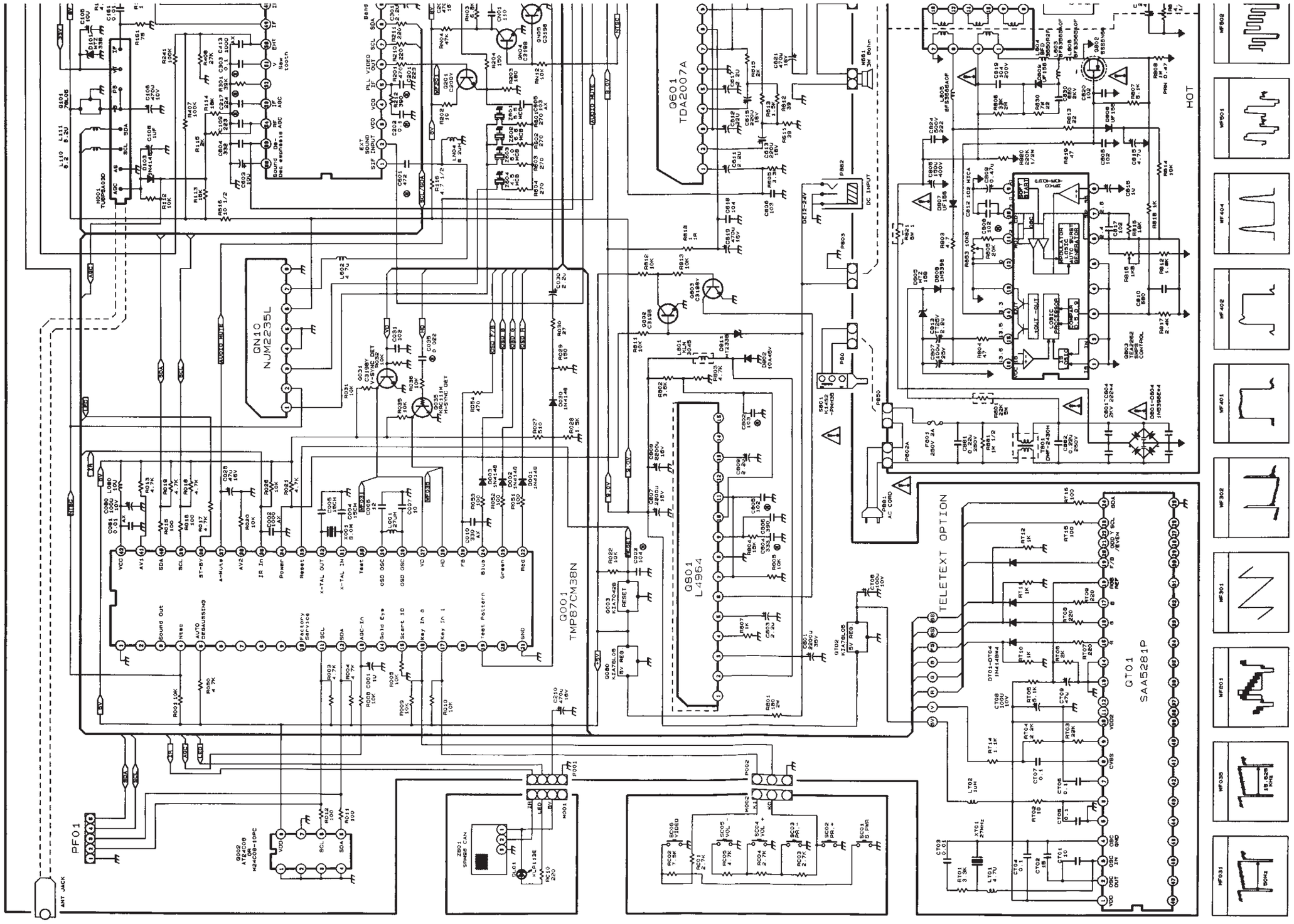
P/NO	ITEM	ITEM NAME
R615	12368202T	CARBON RESISTOR, SB 1/6W 2K OHM J
R616	12368109T	CARBON RESISTOR, SB 1/6W 1 OHM J
R618	12321109T	OXIDE RESISTOR, B 1/2W 1 OHM J
R620	12368104T	CARBON RESISTOR, SB 1/6W 100K OHM J
R661	12368220T	CARBON RESISTOR, SB 1/6W 22 OHM J
R802	12368362T	CARBON RESISTOR, SB 1/6W 3.6K OHM J
R803	12368472T	CARBON RESISTOR, SB 1/6W 4.7K OHM J
R804	12368153T	CARBON RESISTOR, SB 1/6W 15K OHM J
R805	12368103T	CARBON RESISTOR, SB 1/6W 10K OHM J
R806	12368102T	CARBON RESISTOR, SB 1/6W 1K OHM J
R811	12368473T	CARBON RESISTOR, SB 1/6W 47K OHM J
R812	12368103T	CARBON RESISTOR, SB 1/6W 10K OHM J
R813	12368103T	CARBON RESISTOR, SB 1/6W 10K OHM J
R930	12321109T	OXIDE RESISTOR, B 1/2W 1 OHM J
RT01	12368332T	CARBON RESISTOR, SB 1/6W 3.3K OHM J
RT02	12368100T	CARBON RESISTOR, SB 1/6W 10 OHM J
RT03	12368223T	CARBON RESISTOR, SB 1/6W 22K OHM J
RT04	12368222T	CARBON RESISTOR, SB 1/6W 2.2K OHM J
RT05	12368562T	CARBON RESISTOR, SB 1/6W 5.6K OHM J
RT06	12368202T	CARBON RESISTOR, SB 1/6W 2K OHM J
RT07	12368221T	CARBON RESISTOR, SB 1/6W 220 OHM J
RT08	12368221T	CARBON RESISTOR, SB 1/6W 220 OHM J
RT09	12368221T	CARBON RESISTOR, SB 1/6W 220 OHM J
RT10	12368102T	CARBON RESISTOR, SB 1/6W 1K OHM J
RT11	12368102T	CARBON RESISTOR, SB 1/6W 1K OHM J
RT12	12368102T	CARBON RESISTOR, SB 1/6W 1K OHM J
RT14	12368112T	CARBON RESISTOR, SB 1/6W 1.1K OHMJ
RT15	12368101T	CARBON RESISTOR, SB 1/6W 100 OHM J
RT16	12368101T	CARBON RESISTOR, SB 1/6W 100 OHM J
RV11	12368102T	CARBON RESISTOR, SB 1/6W 1K OHM J
RV12	12368224T	CARBON RESISTOR, SB 1/6W 220K OHM J
RV16	12368750T	CARBON RESISTOR, SB 1/6W 75 OHM J
RV20	12368473T	CARBON RESISTOR, SB 1/6W 47K OHM J
RV21	12368104T	CARBON RESISTOR, SB 1/6W 100K OHM J
RV22	12368242T	CARBON RESISTOR, SB 1/6W 2.4K OHM J
RV23	12368471T	CARBON RESISTOR, SB 1/6W 470 OHM J
RV24	12368224T	CARBON RESISTOR, SB 1/6W 220K OHM J
RV25	12368102T	CARBON RESISTOR, SB 1/6W 1K OHM J
RV26	12368750T	CARBON RESISTOR, SB 1/6W 75 OHM J
RV29	12368273T	CARBON RESISTOR, SB 1/6W 27K OHM J
U111	P1893030	PCB, MAIN PTJM01 I10AJ600
C001	12797109T	CHEMICON, 04W 50V 1MF SMALL
C003	12692104T	PLASTIC CAPACITOR, M 50V 0.1MF J
C004	12353150T	CERAMIC CAPACITOR, CH 50V 15PF J
C005	12353150T	CERAMIC CAPACITOR, CH 50V 15PF J
C025	12794470T	CHEMICON, 16V 47MF 85C 5*11
C030	12797229T	CHEMICON, 50V 2.2MF 85C 5*11
C031	12692102T	PLASTIC CAPACITOR, M 50V 1000PF J
C035	12692223T	PLASTIC CAPACITOR, M 50V 0.022MF J
C080	12793101T	CHEMICON, 10V 100MF 85C 5*11
C105	12797100T	CHEMICON, 50V 10MF 85C 5*11
C106	12793471T	CHEMICON, 10V 470MF 85C 8*12
C108	12797109T	CHEMICON, 04W 50V 1MF SMALL
C109	12692223T	PLASTIC CAPACITOR, M 50V 0.022MF J
C201	12692223T	PLASTIC CAPACITOR, M 50V 0.022MF J
C202	12692104T	PLASTIC CAPACITOR, M 50V 0.1MF J
C206	12794101T	CHEMICON, 16V 100MF 85C 6.3*11
C207	12692223T	PLASTIC CAPACITOR, M 50V 0.022MF J
C208	12794470T	CHEMICON, 16V 47MF 85C 5*11
C209	12797229T	CHEMICON, 50V 2.2MF 85C 5*11
C210	12793101T	CHEMICON, 10V 100MF 85C 5*11
C212	12797229T	CHEMICON, 50V 2.2MF 85C 5*11
C213	12692102T	PLASTIC CAPACITOR, M 50V 1000PF J
C217	12825224T	PLASTIC CAP,EB(NON IND)50V 0.22MF J
C218	12692473T	PLASTIC CAPACITOR, M 50V 0.047MF J
C220	12797100T	CHEMICON, 50V 10MF 85C 5*11
C232	12797339T	CHEMICON, 50V 3.3MF 85C 5*11
C291	12794101T	CHEMICON, 16V 100MF 85C 6.3*11
C292	12797100T	CHEMICON, 50V 10MF 85C 5*11
C301	12797229T	CHEMICON, 50V 2.2MF 85C 5*11
C302	12692223T	PLASTIC CAPACITOR, M 50V 0.022MF J
C303	12825104T	PLASTIC CAP, EB(NON IND)50V 0.1MF J
C306	12795101T	CHEMICON, 25V 100MF 85C 6.3*11
C307	12796101T	CHEMICON, 35V 100MF 85C 8*12
C308	12692104T	PLASTIC CAPACITOR, M 50V 0.1MF J
C402	12692103T	PLASTIC CAPACITOR, M 50V 0.01MF J
C407	12692472T	PLASTIC CAPACITOR, M 50V 4700PF J
C408	12797109T	CHEMICON, 04W 50V 1MF SMALL
C409	12692103T	PLASTIC CAPACITOR, M 50V 0.01MF J
C410	12797100T	CHEMICON, 50V 10MF 85C 5*11
C414	12797479T	CHEMICON, 50V 4.7MF 85C 5*11
C415	12692104T	PLASTIC CAPACITOR, M 50V 0.1MF J
C421	12799010T	CHEMICON, 160V 1MF 85C 6.3*11
C501	12692103T	PLASTIC CAPACITOR, M 50V 0.01MF J
C502	12794101T	CHEMICON, 16V 100MF 85C 6.3*11
C503	12692332T	PLASTIC CAPACITOR, M 50V 3300PF J
C504	12692104T	PLASTIC CAPACITOR, M 50V 0.1MF J
C505	12353180T	CERAMIC CAPACITOR, CH 50V 18PF J
C506	12436101T	CERAMIC CAPACITOR, SL 50V 100PF J
C507	12825224T	PLASTIC CAP,EB(NON IND)50V 0.22MF J
C508	12797108T	CHEMICON, 50V 0.1MF 85C 5*11
C601	12692472T	PLASTIC CAPACITOR, M 50V 4700PF J
C602	12692104T	PLASTIC CAPACITOR, M 50V 0.1MF J
C603	12797100T	CHEMICON, 50V 10MF 85C 5*11
C604	12692332T	PLASTIC CAPACITOR, M 50V 3300PF J
C611	12797229T	CHEMICON, 50V 2.2MF 85C 5*11
C612	12794220T	CHEMICON, 16V 22MF 85C 5*11
C613	12794221T	CHEMICON, 16V 220MF 85C 8*12
C614	12692104T	PLASTIC CAPACITOR, M 50V 0.1MF J
C615	12794221T	CHEMICON, 16V 220MF 85C 8*12
C616	12692104T	PLASTIC CAPACITOR, M 50V 0.1MF J
C617	12797229T	CHEMICON, 50V 2.2MF 85C 5*11
C618	12692104T	PLASTIC CAPACITOR, M 50V 0.1MF J
C619	12794471T	CHEMICON, 16V 470MF 85C 10*13
C620	12692104T	PLASTIC CAPACITOR, M 50V 0.1MF J
C621	12794471T	CHEMICON, 16V 470MF 85C 10*13
C802	12692103T	PLASTIC CAPACITOR, M 50V 0.01MF J
C803	12797229T	CHEMICON, 50V 2.2MF 85C 5*11
C804	12692333T	PLASTIC CAPACITOR, M 50V 0.033MF J
C805	12692102T	PLASTIC CAPACITOR, M 50V 1000PF J
C806	12436391T	CERAMIC CAPACITOR, SL 50V 390PF J
C809	12797229T	CHEMICON, 50V 2.2MF 85C 5*11
CT01	12436100T	CERAMIC CAPACITOR, SL 50V 10PF J
CT02	12436150T	CERAMIC CAPACITOR, SL 50V 15PF J
CT03	12692103T	PLASTIC CAPACITOR, M 50V 0.01MF J
CT04	12692104T	PLASTIC CAPACITOR, M 50V 0.1MF J
CT05	12692104T	PLASTIC CAPACITOR, M 50V 0.1MF J
CT06	12692104T	PLASTIC CAPACITOR, M 50V 0.1MF J
CT07	12692104T	PLASTIC CAPACITOR, M 50V 0.1MF J
CT08	12793101T	CHEMICON, 10V 100MF 85C 5*11
CT09	12794470T	CHEMICON, 16V 47MF 85C 5*11
CT11	12692223T	PLASTIC CAPACITOR, M 50V 0.022MF J
CT12	12692223T	PLASTIC CAPACITOR, M 50V 0.022MF J
CT13	12692223T	PLASTIC CAPACITOR, M 50V 0.022MF J
CV12	12797229T	CHEMICON, 50V 2.2MF 85C 5*11
CV16	12797479T	CHEMICON, 50V 4.7MF 85C 5*11
CV20	12692104T	PLASTIC CAPACITOR, M 50V 0.1MF J
CV26	12793221T	CHEMICON, 10V 220MF 85C 6.3*11
L001	11284270T	PEAKING COIL, EL0606RA-270K
L421	11283222T	PEAKING COIL, EL0607RA-222J
Q003	11119699T	IC, VOLTAGE DETECTOR KIA7042AP
Q031	11114056T	TR, KTC1815-Y (KTC3198-Y)
Q035	11114333T	TR, BRT KRC1211 (KRC111M)
Q080	11119387T	IC, KIA78L05P (KIA78L05BP)
Q101	11119387T	IC, KIA78L05P (KIA78L05BP)
Q161	11114066T	TR, KTC388A-TM (KTC3197)

P/NO	ITEM	ITEM NAME
Q201	11114119T	TR, KTC200-Y
Q206	11114056T	TR, KTC1815-Y (KTC3198-Y)
Q402	11114225T	TR, KTC2383-Y (KTC3228-Y)
Q802	11114056T	TR, KTC1815-Y (KTC3198-Y)
Q803	11114056T	TR, KTC1815-Y (KTC3198-Y)
QT02	11119387T	IC, KIA78L05P (KIA78L05BP)
QV20	11114056T	TR, KTC1815-Y (KTC3198-Y)
B001	11859238	SHIELD PLATE-1, IC
C281	12799330T	CHEMICON, 160V 33MF 85C 13*20
C293	12095133B	PLASTIC CAP, MPP 250V 4.4MF
C381	12796471T	CHEMICON, 35V 470MF 85C 10*20
C382	12795471T	CHEMICON, 25V 470MF 85C 10*16
C404	12834823B	PLASTIC CAPACITOR, T 400V 0.082MF K
C411	12834473B	PLASTIC CAPACITOR, T 400V 0.047MF K
C417	12655331T	CHEMI CONDENSER, 105C 35V 330MF
C420	12085032S	CHEM CONDENSER, BPS NP 50V 10MF
C807	12794222T	CHEMICON, 16V 2200MF 85C 13*25
C808	12794222T	CHEMICON, 16V 2200MF 85C 13*25
C841	12796222S	CHEMICON, 35V 2200MF 85C 16*32
C846	12794222T	CHEMICON, 16V 2200MF 85C 13*25
D801	11115584	DIODE, FAST-RECTI RU4YX(LF015-304)
D802	11115566	DIODE, SCHOTTKY B10A45VI(TO-220IS)
D823	11115495	DIODE, SWITCHING FMU22S
D823A	11865602	HEAT SINK, 20LX
D823B	11032381	SCREW, TTB 3*8 SZN
D823C	11971010	COMPOUND SILICON, YG6260
H001	11121203	TUNER, TU8PSA03D PA1C5V IIC DIN
L401	11222001	COIL, LIN KLN2035 4.8UH (DR 8*11)
L403	11261021T	COIL, ELC0607RA-1R0(KRF9229)
L801	11221048	COIL, CHOKE KLN3045 260UH
M501	300921825A	HARNESS, 9P(AWG#24 1007/200L) 250MM
N101	11961024	SOLDER WIRE, ENERGIZED 63SN 1.6MM
N102	11961013	SOLDER BAR, 63SN S63S
N102	11961025	SOLDER WIRE, 63SN 3.0MM
N103	11964033	SOLVENT, IPA4520
N104	11961020	FLUX, JS-64T-3
P001	11164123	PLUG, 4P 5267-04A
P002	11164122	PLUG, 3P 5267-03A
P201	11163084A	SOCKET, RGB 21P(SCART JACK)
P401	11164174	PLUG, 4P
P601	11164121	PLUG,-2P 5267-02A
P661	11164122	PLUG, 3P 5267-03A
P803	11116335	WAFER, 2P YDW236-02W
P882	11163079A	JACK, DC TC18-013-12
P882A	11865460	BRACKET, DC JACK
P901	11116335	WAFER, 2P YDW236-02W
Q001	11118205	IC, MI-COM KMP87CP38N-3630 10AJ600
Q002	11118078	IC, EEPROM-8K AT24C08-10PC (8P3)
Q002	11118078A	IC, EEPROM-8K M24C08-10PC (8P3)
Q291	11114407	THYRISTOR, 2P4M
Q301	11118135	IC, VERTICAL TDA8356N
Q301A	11865543	HEAT SINK,(PLATE)
Q301B	11032388	SCREW, TTBW 3*10 SZN
Q301D	11971010	COMPOUND SILICON, YG6260
Q404	11114223	TR, BU406
Q404A	11865594	HEAT SINK(X-TYPE) 06AE
Q404B	11032382	SCREW, TTB 3*10 SZN
Q404C	11971010	COMPOUND SILICON, YG6260
Q501	11118136	IC, MAIN TDA8842-N2Y
Q601	11119585	IC, AUDIO OUTPUT TDA2007A
Q801	11119277	IC, POWER-REGU L4964 SGS-T
Q801A	11865525	HEAT SINK, (4PIN)
Q801B	11032381	SCREW, TTB 3*8 SZN
Q801C	11971010	COMPOUND SILICON, YG6260
QT01	11119856	IC, TELETEXT DECODER SAA5281P/E
R293	12323333S	OXIDE RESISTOR, B 2W 33K OHM J
R801	12323181S	OXIDE RESISTOR, B 2W 180 OHM J
T401	11224027	TRANS, H.D.T KLN2014
T461	11226191	FBT, DNF-F01417 10AJ600
X001	11153023T	CRYSTAL, 8.000000MHZ 16PF-FD HC 20
X501	11153002T	CRYSTAL, 4.433619MHZ 16PF-FD HC 20
X502	11153093T	X-TAL, 3.579545MHZ SER-FD HC 20 RT
XT01	11153018	CRYSTAL, 27.00000MHZ 20PF-3RD HC 5
Z101	11107144	SAW FILTER, OFWK2950M (SIEMENS)
Z101	11107220	SAW FILTER, K2955M (BG/DK) SIP5K
Z201	11107232T	CERAMIC TRAP, TPWA02B-TF21 MURATA
Z601	11107006AT	C/FILTER, SFSH5.5MCB-TF21 MURATA
Z602	11107007AT	C/FILTER, SFSH6.5MCB-TF21 MURATA
		CRT, PAL PTJM01-2 I10AJ6RST
D901	11115370T	ZD, MTZ7.5B VZ=7.07-7.45V 0.5W
D902	11115003T	SILICON DIODE, 1N4004
D906	11115370T	ZD, MTZ7.5B VZ=7.07-7.45V 0.5W
D907	11115370T	ZD, MTZ7.5B VZ=7.07-7.45V 0.5W
D908	11115370T	ZD, MTZ7.5B VZ=7.07-7.45V 0.5W
EL20	11061303	EYELET, HTR 2.80*2.9 SNI
EL21	11061303	EYELET, HTR 2.80*2.9 SNI
J166	11183004	PLATING WIRE, 0.6MM
R901	12368471T	CARBON RESISTOR, SB 1/6W 470 OHM J
R902	12368471T	CARBON RESISTOR, SB 1/6W 470 OHM J
R903	12368471T	CARBON RESISTOR, SB 1/6W 470 OHM J
R904	12919225T	CARBON RESISTOR, SB 1/2W 2.2M OHM J
R905	12368104T	CARBON RESISTOR, SB 1/6W 100K OHM J
R907	12321102T	OXIDE RESISTOR, B 1/2W 1K OHM J
R908	12321102T	OXIDE RESISTOR, B 1/2W 1K OHM J
R909	12321102T	OXIDE RESISTOR, B 1/2W 1K OHM J
C901	12700100T	CHEMI CON, 04W 250V 10MF SMALL
C902	12095062B	PLASTIC CAPACITOR, TNU 250V 0.1MF J
C903	12700479T	CHEMI CON, 04W 250V 4.7MF SMALL
C904	12211222T	CERAMIC CAPACITOR, B 2KV 2200PF K
Q901	11118138	IC, VIDEO AMPLIFIER TDA6107Q-N1Y
Q901A	11865543	HEAT SINK,(PLATE)
Q901B	11032382	SCREW, TTB 3*10 SZN
Q901C	11971010	COMPOUND SILICON, YG6260
V901A	11116392	SOCKET CRT, PCS633A 14" 28MM
		CONTROL, PAL PTJM01-3 I10AJ6RST
RC01	12368272T	CARBON RESISTOR, SB 1/6W 2.7K OHM J
RC02	12368752T	CARBON RESISTOR, SB 1/6W 7.5K OHM J
RC03	12368272T	CARBON RESISTOR, SB 1/6W 2.7K OHM J
RC04	12368272T	CARBON RESISTOR, SB 1/6W 2.7K OHM J
RC05	12368472T	CARBON RESISTOR, SB 1/6W 4.7K OHM J
M002	300324015	HARNESS,3P 150MM (5264-5395)
SC01	11145067T	SWITCH, TACT KPT-1115AM(TAP)
SC02	11145067T	SWITCH, TACT KPT-1115AM(TAP)
SC03	11145067T	SWITCH, TACT KPT-1115AM(TAP)
SC04	11145067T	SWITCH, TACT KPT-1115AM(TAP)
SC05	11145067T	SWITCH, TACT KPT-1115AM(TAP)
SC06	11145067T	SWITCH, TACT KPT-1115AM(TAP)
		MODULE, PAL PTJM01-4 I10AJ6RST
DL01	11113003T	LED, SLR124 Φ 3 DIFF. ST-LESS TAP
M001	300424015D	HARNESS, 4P 150MM (5264-5395)
ZB01	11132023A	RX-MODULE, KRM-50M
		E/JACK, PAL PTJM01-5 I10AJ6RST
M662	300324026	HARNESS, 3P 260MM (5264-5395)
P662	11163129	E/JACK, TC38-035-01-T HOR 3P

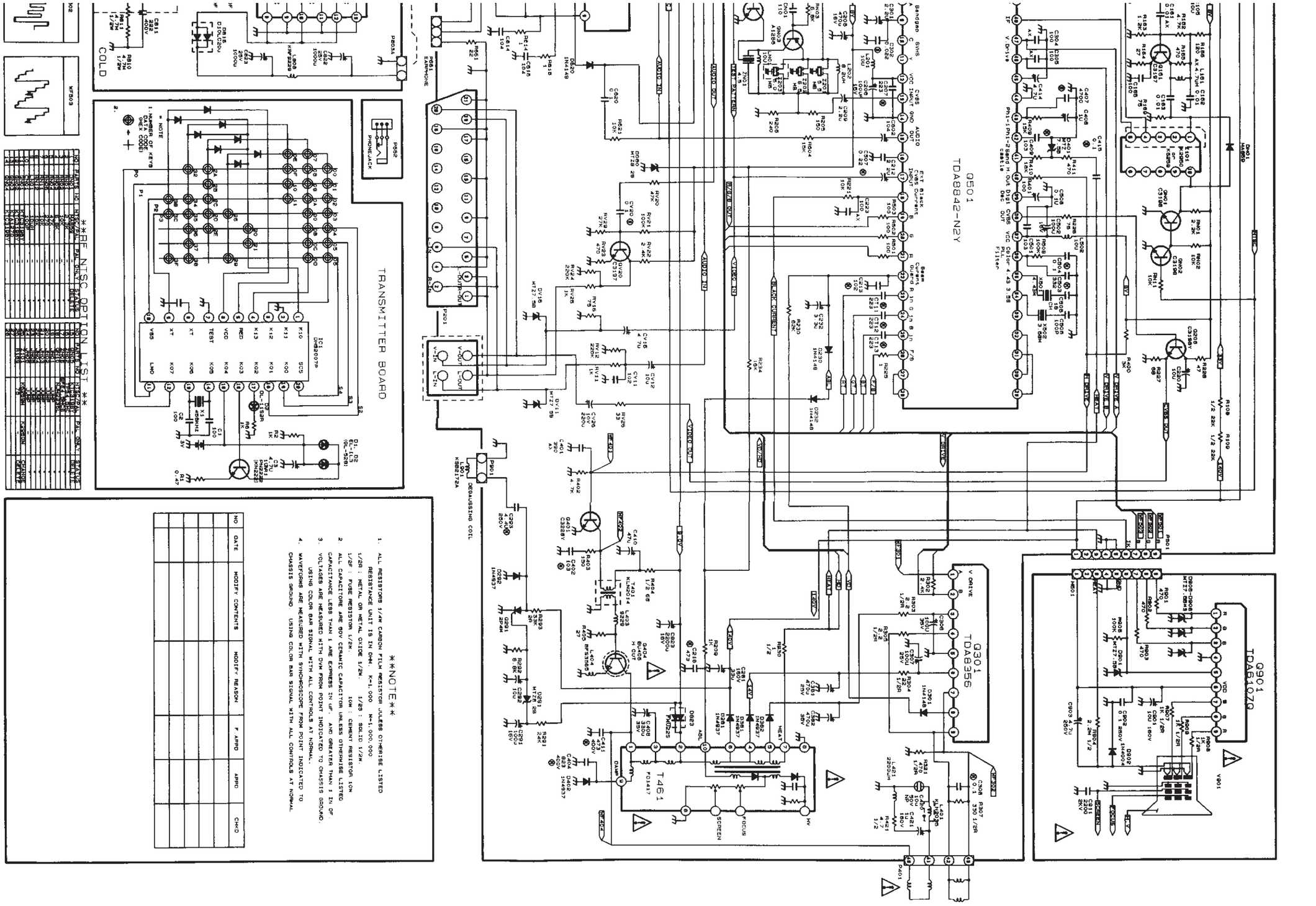
P/NO	ITEM	ITEM NAME
	POWER, PAL PTHP01 110AJ6RST	
C806	12474102T	CERAMIC CAP, B 50V 1000PF K AXIAL
C810	12474681T	CERAMIC CAP, B 50V 680PF K AXIAL
C817	12474102T	CERAMIC CAP, B 50V 1000PF K AXIAL
C820	12474102T	CERAMIC CAP, B 50V 1000PF K AXIAL
D801	11115464T	DIODE, RECTIFIER 1N5398E
D802	11115464T	DIODE, RECTIFIER 1N5398E
D803	11115464T	DIODE, RECTIFIER 1N5398E
D804	11115464T	DIODE, RECTIFIER 1N5398E
D805	11115330T	ZD, MTZ15A
D806	11115464T	DIODE, RECTIFIER 1N5398E
D807	11115458T	DIODE, FAST RECOVERY UF-156
D808	11115458T	DIODE, FAST RECOVERY UF-156
D809	11115458T	DIODE, FAST RECOVERY UF-156
EL01	11061303	EYELET, HTR 2.80*2.9 SNI
EL02	11061303	EYELET, HTR 2.80*2.9 SNI
EL03	11061303	EYELET, HTR 2.80*2.9 SNI
EL04	11061303	EYELET, HTR 2.80*2.9 SNI
EL05	11061303	EYELET, HTR 2.80*2.9 SNI
EL06	11061303	EYELET, HTR 2.80*2.9 SNI
EL07	11061303	EYELET, HTR 2.80*2.9 SNI
EL08	11061303	EYELET, HTR 2.80*2.9 SNI
EL09	11061303	EYELET, HTR 2.80*2.9 SNI
EL10	11061303	EYELET, HTR 2.80*2.9 SNI
ES01	11061202	EYELET, HTR 2.11*2.8 SNI
ES02	11061202	EYELET, HTR 2.11*2.8 SNI
ES03	11061202	EYELET, HTR 2.11*2.8 SNI
ES04	11061202	EYELET, HTR 2.11*2.8 SNI
ES05	11061202	EYELET, HTR 2.11*2.8 SNI
ES06	11061202	EYELET, HTR 2.11*2.8 SNI
ES07	11061202	EYELET, HTR 2.11*2.8 SNI
ES08	11061202	EYELET, HTR 2.11*2.8 SNI
ES09	11061202	EYELET, HTR 2.11*2.8 SNI
ES10	11061202	EYELET, HTR 2.11*2.8 SNI
ES11	11061202	EYELET, HTR 2.11*2.8 SNI
J850	11183004	PLATING WIRE, 0.6MM
JE01	11183004	PLATING WIRE, 0.6MM
JE02	11183004	PLATING WIRE, 0.6MM
JE03	11183004	PLATING WIRE, 0.6MM
JE04	11183004	PLATING WIRE, 0.6MM
JE05	11183004	PLATING WIRE, 0.6MM
JE06	11183004	PLATING WIRE, 0.6MM
JE07	11183004	PLATING WIRE, 0.6MM
JE08	11183004	PLATING WIRE, 0.6MM
L803	11103041T	BEAD CORE, BFS 3565A0F (3.5*6.5)
L805	11103041T	BEAD CORE, BFS 3565A0F (3.5*6.5)
L806	11103041T	BEAD CORE, BFS 3565A0F (3.5*6.5)
N201A	11965057	TAPE, YW-5006 6.2MM*5000M ROLL
N201B	11965058	TAPE, TESAKREPP-4387 6.0MM*5000M
R803	12368479T	CARBON RESISTOR, SB 1/6W 4.7 OHM J
R804	12368470T	CARBON RESISTOR, SB 1/6W 47 OHM J
R805	12368203T	CARBON RESISTOR, SB 1/6W 20K OHM J
R807	12368512T	CARBON RESISTOR, SB 1/6W 5.1K OHM J
R808	12977478T	NON-IND PRN RES, B 1W 0.47 OHM J
R810	12005475T	METAL FILM RES(VDE),1/2W 4.7M OHM
R811	12005475T	METAL FILM RES(VDE),1/2W 4.7M OHM
R812	12368182T	CARBON RESISTOR, SB 1/6W 1.8K OHM J
R813	12368220T	CARBON RESISTOR, SB 1/6W 22 OHM J
R814	12368103T	CARBON RESISTOR, SB 1/6W 10K OHM J
R816	12368183T	CARBON RESISTOR, SB 1/6W 18K OHM J
R817	12368242T	CARBON RESISTOR, SB 1/6W 2.4K OHM J
R818	12368102T	CARBON RESISTOR, SB 1/6W 1K OHM J
R819	12368470T	CARBON RESISTOR, SB 1/6W 47 OHM J
R820	12919224T	CARBON RESISTOR, SB 1/2W 220K OHM J
R881	12919105T	CARBON RESISTOR, SB 1/2W 1M OHM J
U112	P1892962A	PCB, POWER PTHP01 (9BH/9BG/110AJ)
C807	12795470T	CHEMICON, 25V 47MF 85C 5*11
C808	12692102T	PLASTIC CAPACITOR, M 50V 1000PF J
C809	12797478T	CHEMICON, 50V 0.47MF 85C 5*11
C815	12797479T	CHEMICON, 50V 4.7MF 85C 5*11
C816	12797109T	CHEMICON, 04W 50V 1MF SMALL
C821	12214102T	CERAMIC CAPACITOR, B 500V 1000PF K
C824	12214222T	CERAMIC CAPACITOR, B 500V 2200PF K
F801A	11165037T	HOLDER, FUSE 5.2 (TAPPING)
B801A	11843068A	HOLDER, TRANS
B801B	11037308	SCREW, BTBW 3*8 SZN
B801C	11827265	FIBER SHEET, 10BH5
C801	12211222T	CERAMIC CAPACITOR, B 2KV 2200PF K
C802	12211222T	CERAMIC CAPACITOR, B 2KV 2200PF K
C803	12211222T	CERAMIC CAPACITOR, B 2KV 2200PF K
C804	12211222T	CERAMIC CAPACITOR, B 2KV 2200PF K
C805	12087002	CHEMICAL CONDENSER, 400V 150MF
C811	12094142A	CERA-CAP, AC400V 2200PF M AD
C812	12095147B	MICA CAP, DM15F 100V 1000PF J
C813	12576229T	TA SOLID CAPACITOR, 25V 2.2MF K
C819	12828104B	PLASTIC CAPACITOR, T 200V 0.1MF J
C822	12664102T	CHEMI CON, 105C 25V 1000MF SMALL
C823	12664102T	CHEMI CON, 105C 25V 1000MF SMALL
C830	12210102T	CERAMIC CAPACITOR, B 1KV 1000PF M
C881	12095173B	PLASTIC CAP, T AC275V 0.22MF K
C882	12095173B	PLASTIC CAP, T AC275V 0.22MF K
D816	11115554	DIODE, D10LC20U
D816A	11865591	HEAT SINK, 10AF
D816B	11032382	SCREW, TTB 3*10 SZN
D816C	11971010	COMPOUND SILICON, YG6260
F801	11144125	FUSE, 250V 2A 50T 5*20MM S/U/B/R
L804	11103049T	BEAD CORE, BFD3550R2F
L808	11261021T	COIL, ELC0607RA-1R0(KRF9229)
N201	11961024	SOLDER WIRE, ENERGIZED 63SN 1.6MM
N202	11961013	SOLDER BAR, 63SN S63S
N202	11961025	SOLDER WIRE, 63SN 3.0MM
N203	11964033	SOLVENT, IPA4520
N204	11961020	FLUX, JS-64T-3
N205	11962010	SILICON RUBBER, TSE382RTV
P802A	11164034	PLUG, 2P LARGE 5289-2A 5.0MM
P803A	11116335	WAFER, 2P YDW236-02W
Q802	11114495	TR, SMPS OUTPUT FET SSS6N60
Q802A	11865591	HEAT SINK, 10AF
Q802B	11032382	SCREW, TTB 3*10 SZN
Q802C	11971010	COMPOUND SILICON, YG6260
Q803	11119660	IC, SMPS CONTROL TEA2262
R801	12007085	CEMENT RESISTOR, G 5W 22K OHM J PD
R806	12323333S	OXIDE RESISTOR, B 2W 33K OHM J
R815	12061630T	CARBON-VR, 0.2W B 1K OHM FB
R821	12007046	CEMENT RESISTOR, G 5W 1 OHM J PL
R830	12007099	CEMENT RESISTOR, 7W 22 OHM PD
R853	12061634T	CARBON-VR, 0.2W B 10K OHM FB
T801	11211038	COIL, LINE FILTER DMF2430H
T802	11213329	TRANS, SWITCHING KPW-1138 COIL
	COMPLETE CHASSIS, 10AJ6RS	
BC02	11826267	KNOB, KEY FRAME 10AE8
BC02A	11037308	SCREW, BTBW 3*8 SZN
BC02B	11847824	SPACER, 55*10*0.3T BLK
BC02C	11847244	SPACER, 80*12*1T(BLK)
M803	300275622A	HARNESS, 2P(DC)
P881	11176173	CORD AC, KKJ-1004A B-161A 2500MM
S881A	11816150	KNOB, PUSH SWITCH(BLK)

P/NO	ITEM	ITEM NAME
	CABINET, 10AJ6RST	
	FRONT COVER SUB, ASS'Y 10AJ6RST	
K101	39612024	FRONT COVER, ASS'Y 10AJ6RST
K101A	11834242	BOSS COVER-1, 10ADC80JA
K101B	11962037	BOND, PS-BOND
K101C	11845293	PLATE, 10ADC80JA
K101D	11847805	HOLDER, PLATE 10ADC80JA
K101E	11814646	FRONT PANNEL, 10AF2SIP
K101F	23962006	BOND, DONG-A
K101G	11827284	S/W PANEL 10AJ
K101H	11819093	PLATE, B/M(DIA) ROADSTAR 10"(L)
K104	11035310	SCREW, BTB 3*10 SZN
L901	11200050A	COIL, DEGAUS, KSB-2172A 10" YEONHO
NK01	11961024	SOLDER WIRE, ENERGIZED 63SN 1.6MM
NK02	11845001	QUICK TIE
NK03	11962010	SILICON RUBBER, TSE382RTV
V901	11112186	CPT CRT, SAMSUNG A23KQT22X99
V901	151240010	CPT ASS'Y SAMSUNG A23KQT22X99
V911	11112103	CTV CRT, SAMSUNG A23KQT22X
V911A	11227076	COIL, DEFLECTION YOKE DSG-0972EL
V911B	11102021	MAGNET, CPM JH225-KE-00 (P-4-6)
V911C	11965072	TAPE, ACETATE CLOTH SGT730 20MM BLK
V911D	11965086	TAPE, ACETATE COLOTH SGT-730 (WHT)
V911E	11848189	RUBBER, WEDGE DY 55 SR
V911F	11963153	LAQUER, WHT CL440-1000
V911G	11962026	SILICON BOND, 737E/E RTV
V911H	23962006	BOND, DONG-A
V911I	11103034	PERMALLOY, 10*90
V901B	3700171001	CRT EARTH ASS'Y. 9BG
V901C	11734416	SCREW, PBTBW 4*16 SZN
	BACK COVER SUB, ASS'Y 10AJ6RST	
K411	11839747	BACK COVER BODY, 10AJ600(SCART)
K411A	11035412	SCREW, BTB 4*12 SZN
K411B	11712412	SCREW, PP 4*0.7*12
K411E	11039310	SCREW, BTB 3*10 SBN
K412	11957816	LABEL, B/C NAME 10AJ6RST
K413	11957820	LABEL, DATA CODE
K415	11035414	SCREW, BTB 4*14 SZN
K416	11957819	LABEL, SET NUMBER(KEC)
K417	11957821	LABEL, FUSE
K420	23847412	SPACER, 80*12*0.5T BLK
K421A	23962031	DIABOND, 1603H
M661	300225220	HARNESS, 2P 200MM (5264-)
NW01	11961024	SOLDER WIRE, ENERGIZED 63SN 1.6MM
W661	11151081	SPEAKER, SPK1144 77MM 8 OHM
W661A	11858676	SPACER, 40*15*1.5T
W661B	11858677	SPACER, 40*15*1T
	PACKING MATERIAL 1SET, 10AJ6RST	
K701	P1926377	CARTON BOX, 10AJ6RST
K702	P1933397	PACKING 1SET, 10ADC
K704	11943228	POLY BAG(0.015*750*650)10AJ(PRINT)
K705	23968001	STAPLE, 35*19
K706	11957819	LABEL, SET NUMBER(KEC)
K709	11965108	TAPE, CELLO W75

P/NO	ITEM	ITEM NAME
	ACCESSORY 1SET, 10AJ6RST	
Y101	11955446	OWNER'S MANUAL, 10AJ6RST
Y102	11101007	DRY BATTERY, 1.5V AAAM-1.5V(3A)
Y104	11142044	MATCHING UNIT, KC-408
Y104	11142044C	MATCHING UNIT, MT-503N
Y105	11943051	POLY BAG, W230 H360
Y106	23968006	STAPLE
Y201	11124062	ROD-ANT, 3SEC 800MM (2POLE) F660MM
Y202	11176137	CORD DC CAR, 4.0A 125/250V UL/CSA
Y203	23965173	TAPE, MASKING W45
Y222	390110210	REMOCON, RW3920 ROADSTAR 10AJ6RST



CIRCUIT DIAGRAM 1 DI 2


TRANSMITTER BOARD
Q501
TDA8842-N2Y
Q301
TDA8356
Q901
TDA6107Q
T461
NOTE
1. ALL RESISTORS 1/4W CARBON FILM RESISTOR UNLESS OTHERWISE LISTED
RESISTANCE UNIT IS IN OHM. K=1,000 M=1,000,000
1/2R : METAL OR METAL OXIDE 1/2W. 1/2S : SOLID 1/2W.
1/2F : FUSE RESISTOR 1/2W. ION : CEMENT RESISTOR ION
2. ALL CAPACITORE ARE 50V CERAMIC CAPACITOR UNLESS OTHERWISE LISTED
CAPACITANCE LESS THAN 1 ARE EXPRESS IN UF. AND GREATER THAN 1 IN OF
3. VOLTAGES ARE MEASURED WITH DVM FROM POINT INDICATED TO CHASSIS GROUND.
USING COLOR BAR SIGNAL WITH ALL CONTROLS AT NORMAL.
4. WAVEFORMS ARE MEASURED WITH SYNCHROSCOPE FROM POINT INDICATED TO
CHASSIS GROUND. USING COLOR BAR SIGNAL WITH ALL CONTROLS AT NORMAL
NO
DATE
MODIFY CONTENTS
MODIFY REASON
F APPD
APPD
CHKD

CIRCUIT DIAGRAM
2 DI 2